

Register of Australian Herbage Plant Cultivars

B. Legumes

9. Annual Medics

b. *Medicago littoralis* Rhode (strand medic)

cv. Harbinger

Reg. No. B-9b-1

Registered prior to December 1971

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Origin

Originated from a seed sample (C.P.I. 8359) introduced from California by CSIRO in late 1941. The Californian seed was derived from a sample (F.C. 30025) which in all probability (6) came from a U.S.A. introduction, P.I. 138734, collected by Dr. Koelz in Iran and sent to the Forage and Range Research Branch of the U.S.D.A. in 1940.

Testing commenced in 1947 at the Mallee Research Station of the Victorian Department of Agriculture at Walpeup. Its performance was reported and it was released in 1959 (7). Further comparative trials with other species of *Medicago* were reported in Victoria in 1963 (2). In South Australia, trials commenced in 1958 at the Wanbi Research Centre and these results together with those from other sites were reported in 1962 (3). It was later tested in Western Australia (9, 10). First certified by the South Australia Department of Agriculture in 1961-62 and the Victorian and Western Australian Departments of Agriculture in 1964-65. The common name, strand medic for species was applied by the Victorian Herbage Plant Liaison Committee in 1966.

Morphological description (3, 7, 9-11)

A semi-prostrate or procumbent pubescent annual similar in general growth form and morphological characters to *Medicago truncatula*; it differs from *M. truncatula* most noticeably in the shape of the lateral leaflets. Unlike any other line of *Medicago littoralis*, Harbinger is closer morphologically to *Medicago truncatula* var. *tricycla* (8), and there is possibility of its being a hybrid (12).

When grown as spaced plants it forms only a few quadrangular runners with very long internodes. Leaflets are small, light green without markings, hairy on both upper and lower surfaces, margins with shallow serrations, and the side leaflets are rounded in shape. Stipules pale green with darker green venation, deeply serrated, and very lightly hirsute. Flowers larger than in *M. truncatula* and in more compact clusters of three to four and rarely up to six; first flower commonly on 10th-11th node; corolla bright yellow. Pods discoid or cylindrical with flattened ends, about one-third to one-half the size of those of cv. Hannaford; usually in clusters of 1-3 and consisting of an anti-clockwise spiral of 3-4 coils without spines or with short thin spines without hooks; containing 3-5 seeds. Seeds subreniform, flat, creamy white, approximately 425 000/kg.

Agronomic characters (1-3, 7-11)

Winter-growing with the same general adaptation as the barrel medics. It is early-maturing, flowering commencing in later July or early August, i.e. at the same time or 3-4 days earlier than Cyprus barrel medic. It makes rapid early growth and ripens seed about 14 days earlier than cv. Hannaford.

It has given considerably higher herbage yields in winter than the late-maturing barrel medics and a little more than Cyprus at Walpeup; production in spring has been comparable with the barrel medic cultivars. In South Australia it produced 85% more dry matter in first four months after establishment than Hannaford. It seeds prolifically and has yielded more pods and seed than the barrel medics at Walpeup, and regenerates well in short rotation.

It grows well on soils suitable for barrel medics and, in addition, on more sandy alkaline and slightly acid soils where barrel medic will not grow (9-11). It is adapted to a much greater range of loamy soils than was earlier believed (11).

It may do comparatively well without effective nodulation (5) but nodulates satisfactorily with *Rhizobium* strains U45 and SU47 which are contained in Australian commercial inoculant 'A'. It is extremely sensitive to waterlogging (9, 10).

Cv. Harbinger's high winter production, early maturation, and ability to set seed satisfactorily make it suitable for low rainfall districts with a short growing season. It does not dry off as quickly as Cyprus in an early spring dry spell (11). In the east a minimum average growing season of 4-5 months is needed (3), whilst in Western Australia it is considered most suitable for districts with less than a four months' growing season and 300-400 mm annual rainfall (9).

Like other annual medics it is subject to attack by the Sitona weevil (4).

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