

Register of Australian Herbage Plant Cultivars

B. Legumes

9. Annual Medics

a. *Medicago truncatula* Gaertn. var. *truncatula* (barrel medic)

cv. Jemalong

Reg. No. B-9a-2

Registered prior to December 1971

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Origin

Originated from a single plant selection collected on 'Jemalong' station in the Forbes district in 1939 by F.W. Hely of CSIRO (4). Apparent growth vigour and satisfactory pod type, together with generally good nodulating behaviour with native populations of nodule bacteria in near neutral moderately fertile soils, were important factors in the choice of this plant from a wide range of material (4, 11).

Seed was multiplied and distributed by CSIRO in 1949 and cooperative field trials made by that organization and the Department of Agriculture of New South Wales (4). It proved a superior type at Wagga, Temora, Condobolin, and Crooble (3, 4). Seed was then increased to commercial harvest stage by O. Uebergang at Crooble in 1955, and certified by New South Wales Department of Agriculture under the name Strain 173 in that year. Second commercial grower of certified seed was P. Trebeck, Pilliga, N.S.W. Also certified 1961-62 in South Australia and 1964 in Victoria. In 1966 the New South Wales Herbage Plant Liaison Committee changed its name to Jemalong barrel medic.

Morphological description (2, 4, 13)

As for cv. Hannaford except that it is less variable in growth habit and burr type and a little more erect in habit. There is a variable but prominent purple-brown anthocyanin wedge-shaped mark extending from near the base to about the top third of the leaflet; this mark starts to fade during spring and tends to disappear late in the season. Spaced plants established during April at Canberra flowered at 7th-8th node on primary runners early in September. The pods consist of a tightly wound anti-clockwise spiral of about six coils hardening at maturity, bearing a double row of short almost straight unhooked spines about 3 mm long and containing 10-12 seeds. Approximately 300 000 seeds/kg.

Agronomic characters (1-15)

Similar to cv. Hannaford in general agronomic characters. It commences to flower, however, in early September, a few days to one week later than cv. Hannaford, i.e. a good deal later than Dwalganup sub clover but earlier than Bacchus March sub clover. At Condobolin in New South Wales it flowers about 14.5 weeks after emergence.

It is more productive than cv. Hannaford in the eastern States including South Australia. It is suitable for the lower rainfall areas of the wheat belt in this region. In Western Australia it is probably only well suited to the higher rainfall areas of the cereal belt and certain limited areas of calcareous sandy soils. In South Australia, on the other hand, it is regarded as the most adaptable cultivar of barrel medic to a wide range of soil types from calcareous sands to sandy red-brown earths to grey-black clay loams.

Seed yields in lower rainfall areas may be 336 kg in a good season whilst yields up to 2770 kg/ha obtained under irrigation.

It nodulates satisfactorily with *Rhizobium* strains U45 and SU47, which are contained in Australian commercial inoculant 'A'. It is also compatible with a moderate proportion of rhizobia occurring naturally in the soils of central New South Wales (11).

A substantial coumestan (especially 4-methoxycoumestrol) content has been shown to occur under certain conditions in the leaves and pods of Jemalong, similar to the situation described for Hannaford (q.v.)

Cv. Jemalong is subject to attack by the Sitona weevil as described for cv. Hannaford (q.v.)

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