

NEW HERBAGE PLANT CULTIVARS

B. LEGUMES

9. ANNUAL MEDICS

- f. *Medicago scutellata* (L.) Mill. (snail medic) cv. **Kelson**
Reg. No. B-9f-4 Registered January, 1989

Selectors: E. J. WESTON and K. J. LEHANE

Queensland Department of Primary Industries, Toowoomba, Qld 4350, Australia

Origin

Seed of Kelson snail medic was collected in Hungary by Professor K. A. Lesins, University of Alberta and introduced in 1976 into the medic collection maintained by the South Australian Department of Agriculture under the accession number SA 3508. Seed was made available to the Queensland Department of Primary Industries in 1980. Kelson was selected from 50 snail medics evaluated at Toowoomba and in southern inland Queensland. "Kelson" is the name of the property on the Darling Downs where the plant was selected. Breeders' seed is maintained by the Queensland Department of Primary Industries and the South Australian Seedgrowers Cooperative Limited (SEEDCO).

Submitted by the Queensland Department of Primary Industries and recommended for registration by the Queensland Herbage Plant Liaison Committee.

Morphological description

Cotyledons of Kelson have 5 to 10 or occasionally no brown or purple flecks compared with 1 or 2 or no flecks for Robinson and no flecks for Sava. These markings fade quickly and flecks which develop in the unifoliate and trifoliate leaves of Kelson and Robinson are similar. While the leaflets of Robinson are approximately half as wide as long, those of Kelson are often 80% as wide as long. They are elliptic to broadly obovate and measure 30 to 35 mm long and 24 to 30 mm wide.

Seeds are large, approximately 50,000 seeds per kilogram. There are 15% more seeds per pod in Kelson than in Robinson.

Agronomic characters

Kelson grows well on fertile neutral to alkaline cracking clay soils. It has competed strongly in commercial grass-legume pasture in a 650 mm summer dominant (70:30) rainfall. It is later maturing, and therefore productive in winter forage cropping systems. In southern inland Queensland rainfall probability increases after August and Kelson exploits favourable conditions at that time.

From May/June plantings, Kelson flowers in approximately 100 days compared with 79 and 73 days in Robinson and Sava, respectively. Unlike the early maturing cultivars, which are insensitive to vernalization and photoperiod (Clarkson and Russell 1975), Kelson does not flower before or during winter even from very early plantings and when exposed to moisture stress during winter, probably because of a vernalization requirement. There is a risk of poor seed set, but in forage cropping systems, this is of little consequence.

In seed increase stands Kelson has produced 300 kg per ha of clean seed. This is approximately half the yield of early maturing lines grown under the same conditions.

Kelson has consistently outyielded the early maturing snail medics in small plot screening experiments. Where it has been compared with early maturing lines in commercial Rhodes grass pasture grazed by cattle, it has shown superior dry matter production. Kelson has outyielded Robinson in spring by a factor of four, over a two year period (Weston and Lehane 1986).

Kelson has a high level of hard seed. In a comparison with Robinson, Kelson retained 89.6% hard seed and Robinson 73.8% hard seed five months after harvest at Parafield, S.A. (E. J. Crawford, pers. comm.).

During vegetative growth, Kelson is tolerant of both the spotted alfalfa aphid (*Therioaphis trifolii* (Monell) f. *maculata*) and the blue green aphid (*Acyrtosiphon kondoi* Shinji). Snail medics become moderately susceptible to both aphids after flowering.

Late flowering exposes Kelson to conditions suitable for *Heliothis* sp. multiplication. Damage has been recorded in seed production swards.

Seed production under certification has been undertaken by the South Australian Seedgrowers Co-operative Limited.

ACKNOWLEDGEMENT

We are indebted to the Department of Agriculture of South Australia for maintenance of the National Medic Collection, for initial screening and characterisation of accessions and for distribution of seed to other States. The contribution of the Wheat Research Council in providing funds for a National Annual Medic Improvement Programme is also acknowledged.

REFERENCES

- CLARKSON, N. M. and RUSSELL, J. S. (1975).—Flowering responses to vernalization and photoperiod in annual medics (*Medicago* spp.) *Aust. J. Agric. Res.* 26, 831-838.
 WESTON, E. J. and LEHANE, K. J. (1986).—Pasture Management Branch Technical Annual Report. Queensland Department of Primary Industries, p.77.

11. SERRADELLA

- (a) *Ornithopus compressus* L. (yellow serradella) cv. **Madeira**
 Reg. No. B-11a-6. Registered March, 1988.

Primary Selectors: DR J. S. GLADSTONES and DR M. D. A. BOLLAND

Department of Agriculture, Baron-Hay Court, South Perth, W.A. 6151

Final Selector: D. L. LLOYD

Department of Primary Industries, P.O. Box 102, Toowoomba, Qld., 4350

Origin

Collected by C. M. Francis and Carlos Gomez Pitiera, INIA, Badajoz, Spain, on July 5, 1979 at Pico Don Barcelos, near Funchal, Madeira. Latitude 32°37'N, longitude 16°54'W; altitude 250 m; annual rainfall approximately 500 mm; growing on friable chocolate-brown loam derived from basalt, pH 6.5; no current grazing. Tested under the collector's code number MC2.