

Register of Australian Herbage Plant Cultivars

B. Legumes

9. Annual Medics

d. *Medicago tornata* (L.) Mill. (disc medic)

cv. Swani

Reg. No. B-9d-3

Registered February 1979

Published in the Journal of the Australian Institute of Agricultural Science 46(2) 136-7, 1980.

Origin (4, 6, 7)

Swani was selected by C.M. Francis and M. Khalil from collections made by J. Roberts, N.J. Halse, and M. Khalil from the typically fine, sandy, aeolian soils 1 km north of Swani, north-west Libya. The arid environment (200 mm annual average rainfall) yielded a range of early maturing ecotypes from which cv. Swani was selected (7).

Subsequent field evaluation has been undertaken by the Western Australian Department of Agriculture and its representatives on the Jefara Plains Authority in Libya.

Submitted for registration by the Western Australian Department of Agriculture. Recommended for registration by the Western Australian Herbage Plant Liaison Committee. Breeders' seed is being maintained by the Western Australian Department of Agriculture. Registered February 1980.

Morphological description

According to Heyn's classification (5), the cultivar is representative of var. *rugulosa* of the species and thus in pod form resembles cv. Tornafeld but is more prostrate in growth habit than that cultivar. Lower leaf surface hirsute. Young leaflets have distinct white flecking. Leaflets 10-15 mm long, c. 10 mm wide, obovate to obovate cuneate, upper half of leaflet with serrate margin. Peduncle much longer than petiole, with 6-8 flowers, crowded in inflorescence. Flower up to 8 mm long. Young pod concealed within calyx. Coils of pod 1-2 anti-clockwise, 5-10 mm diameter. About 190 000 seeds/kg.

Agronomic characters (1, 2, 3, 4, 6, 7)

In Perth, Swani flowers about 2 months after germination, 4-5 days earlier than Cyprus barrel medic or Harbinger strand medic and some 3 weeks earlier than Tornafeld disc medic. Coumestrol content is low (25 ppm) and hard seed content is high and similar to cv. Cyprus (7). Under Western Australian summer conditions at least 80% of the seed is still hard at the break of the season.

It has seeded well even in less than 200 mm rainfall in successive seasons (1977/78) at Tenindewa (yielding 90kg/ha, 101 kg/ha respectively) near Geraldton, W.A. Seed yields in both years have been at least double and herbage production equalled that of Tornafeld in the dry short seasons (3). In Libya, Swani flowers earlier than Cyprus or Harbinger and has grown and seeded well in rainfall as low as 125 mm (2).

A prostrate plant selected under heavily grazed conditions, it will be best suited in neutral to alkaline sandy soils which the species colonises more or less specifically in its country of origin (4).

It is nodulated effectively in the field with the standard commercial *Rhizobium* strain U45 (1) as well as wild isolates from Libya (6). Seedling vigour in these trials was about twice that of Tornafeld, Harbinger or Cyprus when assessed on a single plant basis.

The burr form makes it ideally suited to suction harvesters and it is considerably easier to thresh than Harbinger under field conditions. Swani is susceptible to attack by both the blue-green and spotted alfalfa aphids.

References

1. Chatel, D.L. (1979). Annu. Rep. Plant Res. Div., W.A. Dep. Agric.
2. Ewing, M. (1978). Jefara Plains Authority (personal communication).
3. Francis, C.M. (1978). Annu. Rep. Plant. Res. Div. W.A. Dep. Agric. p. 35.

4. Francis, C.M. (1978). Ecology and distribution of *Medicago* species in north-west Libya. Rep. to Int. Board for Plant Genet. Resources, F.A.O.
5. Heyn, C.C. (1963). The Annual Species of *Medicago*. *Scripta Hierosolymitana*. (Hebrew Univ. Press: Jerusalem.)
6. Kahlil, M. (1978). Masters preliminary thesis. Univ. W.A.
7. Kahlil, M., Francis, C.M., and Halse, N.J. (1977). Annual *Medicago* ecotype from north-west Libya. 1. Preliminary agronomic evaluation. W.A. Dep. Agric. Tech. Bull. Series No. 37.