

# Register of Australian Herbage Plant Cultivars

## B. Legumes

### 1. Clover

#### *Trifolium repens* L. (white clover) cv. Siral

Reg. No. B-1a-6

Registered September 1976

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#### Origin

Derived from an introduction, CPI 19434, collected by C. Neal-Smith in 1954 near Medea in the Tel Atlas region of Algeria; the site is at an altitude of 820 m and has a mean annual rainfall of 850 mm which is winter incident.

Submitted for registration by the New South Wales Department of Agriculture and recommended for registration by the New South Wales Herbage Plant Liaison Committee. Registered September 1976.

#### Morphological description (2)

The vegetative parts of Siral are intermediate in size between Grasslands Huia and Haifa. The leaflets are ovate to slightly diamond shaped and are emarginate with a flat apex. The mature leaflets are about 25 mm wide and 30 mm long with veins which are less pronounced than Ladino. A light green crescent shaped marking crosses the leaflet at a position slightly less than halfway from the base; this marking is less pronounced than in Ladino and Haifa and during the cooler part of the year may be reduced to two indistinct markings on the leaf margins or may be completely absent. While the leaves are deep green like those of Ladino from midspring to early autumn, they become much lighter coloured in the cooler months when Siral is characteristically pale green. Nitrogen applications do not affect the winter colour. The flowers of Siral resemble those of Ladino but the peduncles are both shorter and thinner. Siral produces less seed than Haifa, its seeding ability being comparable with Grasslands Huia. Average number of seeds is  $1.5 \times 10^6$  per kg.

The cyanogenetic potential of Siral is substantially higher than that of Ladino, Louisiana and Grasslands Huia and slightly higher than Haifa (2).

#### Agronomic characters (1,3,4,5)

Siral has been compared in pure stands with commercial white clover cultivars, selections of natural ecotypes and introductions chiefly from the Mediterranean region (Israel, Lebanon, Morocco, Algeria, Spain and Portugal). It shows in strong measure the winter productivity which is a common feature of white clovers of Mediterranean origin. In the mild environment of the south coast of New South Wales Siral produces much more in winter than the commercial cultivars Grasslands Huia, Ladino and Louisiana (5) being comparable in yield with Haifa. Siral has also shown good cool-season production in pure stands on the Northern and Southern Tablelands of New South Wales (3), under irrigation in South Australia (1) and in trials in Tasmania (4), but its winter production is relatively less outstanding in these colder environments, and it has shown some susceptibility to severe winter cold on the Southern Tablelands of New South Wales.

Siral produces less in summer than Grasslands Huia, Ladino or Louisiana and thus yields more uniformly throughout the year. Siral is outstanding in production and persistence under severe moisture stress. While Haifa, the cultivar which it most closely resembles in seasonal growth and productivity, frequently survives severe moisture stress by regeneration from seed, Siral persists characteristically by plant survival and renewal of growth; production is thus better maintained under erratic moisture conditions.

The performance of Siral in mixed swards under grazing has not been conclusively established. In Tasmania in mixed swards with ryegrass, it produced less than Grasslands Huia and Ladino and its rate and ease of establishment were no better than Grasslands Huia (4). On the south coast of New South

Wales it established vigorously in mixed swards with ryegrass retaining much of the seedling vigour and ease of establishment which are outstanding characteristics of Siral sown in pure stands in that environment.

Time of flowering is intermediate between Haifa and Ladino. Siral does not enter such an intensive flowering phase as Haifa and remains in a leafy state over the whole reproductive period.

Breeders' seed will be maintained by the Pasture Research Unit, Berry, N.S.W.

#### **References**

1. Crawford, E.J. (1975). Personal communication. S. Aust. Dep. Agric., Adelaide.
2. Keast, J.C. (1972). Personal communication. Vet. Res. Stn. N.S.W. Dep. Agric., Glenfield, N.S.W.
3. Lovett, J.V., and Neal-Smith, C.A. (1974). The performance of introduced lines of white clover (*Trifolium repens* L.) and red clover (*T. pratense* L.) grown at Canberra, A.C.T. and Armidale, N.S.W. CSIRO Aust. Plant Introd. Rev., **10**, 20-9.
4. Martin, G. (1975). Personal communication. Mt Pleasant Labs, Tas. Dep. Agric., Launceston, Tas.
5. Wright, W.A. (1972). White clovers give more winter production. *Agric. Gaz. N.S.W.*, **83**, 127.