

Register of Australian Herbage Plant Cultivars

B. Legumes

1. Clover

Trifolium repens L. (white clover) cv. Haifa

Reg. No. B-1a-5

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Origin

Derived from seed collected by J.F. Miles and C.M. Donald of CSIRO, in 1951 from the Neveh-Yaar Agricultural Experiment Station near Haifa, and introduced to Australia as C.P.I.15648. The material at Neveh-Yaar was derived from a line collected in the Huleh district of north-east Israel.

Seed harvested at Canberra in 1953 was supplied to the New South Wales Department of Agriculture and accessioned La 258; later changed to P 1354. In row and sward trials conducted from 1954 to 1956 at Grafton Agricultural Research Station, C.P.I.15648 performed well.

The first sowing for seed increase was made in 1957. However, the seed increase areas were not completely isolated from the naturalized ecotype and some genetic shift was noted in subsequent generations.

In 1963 several thousand seedlings were raised in the glasshouse and from these several hundred were selected for nearness to the distinctive leaf colour and markings of the original introduction. These seedlings were planted under isolation at Cangai (west of Grafton), N.S.W. First-generation seed was used to increase the area of the isolation to 0.20 ha in 1964. Seed harvested from this area has been used in glass-house plant nutrition trials and the plants grown have shown satisfactory uniformity. It has been reported on under the selection name Israel (2,3). 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 March 1971.

Morphological description

In Haifa all vegetative parts are large as in Ladino. However it is more stoloniferous, not as tall, and produces a denser sward than Ladino. The leaflets are rounded, lighter in colour than other cultivars of white clover, and have conspicuous white markings which vary from heart to crescent-shaped. The petioles are hollow. HCN content is moderately high compared with the naturalized Grafton ecotype and Ladino (1).

Agronomic characters

Haifa has been compared with introductions of white clover from England, Lebanon, Italy, Israel, and the U.S.A.; with selections from naturalized ecotypes of north-eastern N.S.W.; and with the commercial cultivars in a subtropical environment at Grafton (4,5). It has been consistently outstanding because of superior heat tolerance, productivity, persistence, and seeding ability. It perennates better than the commercial cultivars, particularly on the droughty, low-fertility soils of the Clarence basin (1000 mm rainfall) (2,3). It was not superior to Ladino in the higher-rainfall (2000 mm rainfall) Hydes Creek, Bellingen district (5).

Haifa, like the Clarence valley ecotype, is adapted to a winter growth period but will grow well throughout the year given adequate moisture. In summer it is likely to be less productive than Ladino when grown under favourable conditions of soil and moisture in northern New South Wales (3).

At Grafton, Haifa flowers 2-4 weeks earlier than Grasslands Huia and Ladino but is 1-2 weeks later than the naturalized Clarence valley ecotypes. It also produces considerably more seed than Grasslands Huia and Ladino grown under short-day summer conditions (2,4,6).

References

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