Register of Australian Herbage Plant Cultivars

B. Legumes
8. Lucerne

Medicago sativa L. (lucerne) cv. Hallmark

Reg. No. B-8a-25
Registered 1 April 1999

Originators: R. A. Bray\textsuperscript{A}, J. A. G. Irwin\textsuperscript{B}
\textsuperscript{A} CSIRO Tropical Agriculture, 306 Carmody Road, St Lucia, Qld 4067, Australia.
\textsuperscript{B} Botany Department, The University of Queensland, Brisbane, Qld 4072, Australia.

Registrar: W. M. Kelman
CSIRO Plant Industry, GPO Box 1600, Canberra, ACT 2601, Australia.

Released by CSIRO Tropical Agriculture, 306 Carmody Road, St Lucia, Qld 4067, and The University of Queensland, Brisbane, Qld 4072, Australia.


Morphological description
Hallmark is a winter-active cultivar (dormancy group 8); in appearance it is intermediate between Sequel HR and Trifecta (Oram 1990), not as tall as Sequel HR in spring and of similar height to Aquarius, Pioneer Brand L69 and WL516. Flowers are purple and time to commencement of flowering in autumn is similar to Aquarius and PL69 and later than Sequel HR and WL516.

Agronomic characters
Hallmark combines high levels of resistance to C. trifolii and P. medicaginis with high levels of resistance to spotted alfalfa aphid and stem nematode. The proportion of its plants resistant to C. trifolii (42%) is significantly higher than that of Aquarius or WL516 but not as high as Sequel HR (70%) and PL69 (66%). The high resistance of Hallmark to P. medicaginis (45%) is not significantly different to Aquarius, Sequel HR, PL69 or WL516; the proportion of plants resistant to spotted alfalfa aphid (61.5%) is significantly higher than that of Aquarius and Sequel HR; the proportion of plants resistant to blue green aphid (33%) is not significantly different from Sequel HR, Sequel and Trifecta; and the proportion of plants resistant to stem nematode is significantly higher than PL69. Hallmark is the only cultivar with high levels of resistance to all 5 of these pathogens/pests.

Two irrigated trials have been conducted by Mr Kevin Lowe of Queensland Department of Primary Industries, Gatton, from 1993 to 1996 (34 cuts) and 1995 to 1998 (33 cuts). Hallmark was one of the highest yielding cultivars in the trials, with similar yields to Aquarius and PL69; Hallmark significantly outyielded Trifecta and Hunter River by 12 and 45%, respectively, in trial 1; in trial 2, Hallmark significantly outyielded Sequel HR and Hunter River by 7 and 32% respectively.

Hallmark has been developed from a broad genetic base, tracing to Trifecta, Sequel and North American-derived material with additional disease and pest resistances. It is expected to retain the broad adaptation of Trifecta, but to outperform it in a variety of situations, including hay making and grazing, because of its superior disease and pest resistance.

Acknowledgments
Technical assistance was provided by L. Hart and J. Mackie. Data from the Gatton trials were supplied by K. F. Lowe, Queensland Department of Primary Industries; data on resistance to spotted alfalfa aphid and blue green aphid were provided by Dr R. W. Williams, NSW Agriculture; and data on stem nematode resistance were provided by Mr G. Auricht, South Australian Research and Development Institute.
References