

Register of Australian Herbage Plant Cultivars

B. Legumes

1. Clover

Trifolium subterraneum ssp. *subterraneum* (Katzn. et Morley) Zohary and Heller (sub clover) cv. Dalkeith

Reg. No. B-1d-22

Registered April 1983

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Origin

Dalkeith was discovered and collected in 1967 by Dr. G.S. Gladstones, then of the University of Western Australia, growing as a naturalised plant growing in the vicinity of the bowling club at Dalkeith, a western suburb of Perth. Following preliminary screening in nursery rows for biochemical and major agronomic characters, seed was supplied from the National Subterranean Clover Improvement Programme (1,2), Perth, for agronomic evaluation of Dalkeith in New South Wales. Submitted for registration by the New South Wales Department of Agriculture. The Western Australian Department of Agriculture will maintain breeders' seed. A pedigreed seed production scheme shall be adopted to produce commercial seed. Registered April, 1983.

Morphological description (3)

Dalkeith resembles cv. Dwalganup in many morphological respects, particularly the crescent marking on the leaflet (central light green spot with faint whitish arms at the sides), stipule pigmentation (red veined), and calyx pigmentation (pigmentation only on the lobes and the adjacent upper edge of the calyx tube). Seeds large, similar to or slightly larger than those of cv. Dwalganup. Seedlings prostrate, the unifoliate leaf with a small crescent spot. Dalkeith can be distinguished from cv. Dwalganup by later flowering (10-14 days after Dwalganup), more robust habit, greater distal indentation of the trifoliate leaflets, greater adpression of the hairs on all plant parts., more purplish colour of the stems, and particularly by its almost complete lack of anthocyanin flushing and flecking on the leaves. Biochemically, Dalkeith is readily distinguished from Dwalganup by its much lower formononetin content and also by its isozyme patterns (4).

Agronomic characters (3,5,6)

Dalkeith is an early to midseason, hardseeded strain that is a potential alternative to cv. Daliak. When grown at Perth, total isoflavone content of Dalkeith is similar to that of Daliak (about 0.8%), but the formononetin content (0.05% is substantially lower (*cf.* Daliak 0.10 to 0.25%). Varying somewhat with environments, Dalkeith flowers a little after Daliak and before Seaton Park. Hardseededness is high, generally similar to that in cv. Nungarin and greater than in cvv. Northam, Dwalganup, Geraldton and Daliak. Unlike Daliak, Dalkeith is susceptible to clover scorch (*Kabatiella caulivira* (Kitch.) Karak). In glasshouse tests (7), Dalkeith is rated as tolerant and Daliak as susceptible (Dalkeith rating 2.75 *cf.* Daliak 4.5, on 0 – 5 scale) to blue-green aphid (*Acyrtosiphon kondoi* Shinji).

In southern and central New South Wales during the period 1975-82, Dalkeith was compared with a range of subterranean clover cultivars (5,6). After the establishment year, it regenerated better than most other strains of early to mid-season maturity, particularly on the Central Slopes. It has persisted consistently well, equaling cv. Nungarin which it outyields in spring under favourable conditions.

References

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