

# Register of Australian Herbage Plant Cultivars

## B. Legumes

### 1. Clover

#### *Trifolium fragiferum* L. (strawberry clover) cv. Palestine

Reg. No. B-1c-1

Registered prior to December 1971

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#### Origin

Originated as an ecotype in the vicinity of the Dead Sea in Israel. Introduced into Australia by H.C. Trumble of the Waite Agricultural Research Institute in 1929 from the Salisbury Experiment Station in Southern Rhodesia. Salisbury had obtained seed of this line some four or five years earlier from Palestine. In initial trials at the Waite Agricultural Research Institute it gave superior yields to commercial strawberry clover. Between 1930 and 1935, samples of seed and runners were distributed from the Waite Institute to higher rainfall districts in South Australia and other States for trial. Seed given to Mr. N.J. McBain of Coonawarra, S.A., in 1935 formed the primary source of commercial seed production which commenced in 1938. Further trials in 1938 on swampy land at Meadows, S.A., revealed a greater vigour in Palestine and in Shearmans than in any other strain tested. First certified by the South Australian Department of Agriculture in 1950-51 and the Victorian Department of Agriculture in 1960; it is also certified by the Western Australian Department of Agriculture.

#### Morphological description (3,6,7)

Perennial with rather coarse, prostrate, hairless stems which root at nodes. Stolon development more vigorous, and habit slightly more erect and lax, and leaves larger than most other varieties. Petioles are long with few hairs on upper part. Leaflets bluish green, large, oval to obovate, sometimes spade-shaped, and minutely toothed, with some hairs on under surface along the midrib and veins, usually bearing a light coloured crescent associated with some brown anthocyanin markings not prominent, sometimes plain; veins closely spaced, very much branched and curved outwards from the midrib to the edge. Stipules large, hairless with prominent veins; broad at base and encircling stem, the free portions narrow, rather small, and tapering to a long sharp point; becoming thin and papery. Inflorescence a subglobular head which has an involucre of several united thin papery lanceolate bracts and is carried on a peduncle usually longer than the petioles. The flowers are borne on very short stalks; corolla pinkish white; calyx become inflated and reticulated following fertilization and encloses the pod. Pod small, egg-shaped, with 1-2 seeds. Seed obovoid, usually nearly symmetrical, apex truncate and slightly notched, furrow indistinct, hilum in terminal notch, varying from light yellow to brown, often liberally flecked with dark or black spots and splashes; approx. 771,000-793,000 per kg.

#### Agronomic characters (1,5-7)

Adapted to a temperate climate and requiring a minimum of 760 mm annual rainfall for satisfactory growth. It is early spring-flowering, i.e. earlier than O'Connors. Experiments by N.S. Tiver and C.A. Neal-Smith at the Waite Agricultural Research Institute for a 4-yr period showed Palestine to be more productive during winter and early spring than most other varieties, and much more productive than cv. O'Connors during this period.

It is tolerant of a wide range of soil acidity, growing on acid sandy soils of pH 5.5-6.5 to peats and black clays with a pH of 7.0-9.0. It seems best adapted to neutral-alkaline soils with a high lime content, and has a high phosphate and potash requirement. It is tolerant of moderately high soil salinity and is relatively resistant to flooding and repeated inundation. It is not adversely affected by surface water submerging the plants for up to three months provided there is some movement in the water; submergence for 6-8 weeks in stagnant water may be fatal (1).

Cv. Palestine does well in slightly saline and swampy situations where white clover does not thrive, and has most appropriate application in areas with over 1000 mm rainfall, under irrigation in lower rainfall districts, and in swampy and saline locations. It is predominantly self incompatible and mostly cross pollinated (4). It nodulates satisfactorily with Rhizobium strain TA contained in Australian commercial inoculant 'B'.

#### References

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