

Balansa clover - a new pasture species

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Balansa clover (*Trifolium balansae*) is an annual legume and was first introduced into Australia from Turkey in 1939. Early testing of the three introductions of balansa clover described the plant as "showing promise". Subsequent testing in South Australia (Beale and Crawford 1975) has indicated that it has considerable potential, both as a hay plant and as a pasture species well suited to continuous grazing. Application has been made to register C.P.I. 45856 of this species.

Description of the Plant

In screening trials conducted on Kangaroo Island in the early 1970's, balansa clover was selected for further study on the basis of its winter and spring growth, earliness of flowering, good seed set and extremely high tolerance to clover scorch (*Kabatiella caulivora*). Subsequent testing on Kangaroo Island and at Kybybolite Research Centre in the South-East of South Australia has also indicated that it is capable of tolerating periods of waterlogging during winter. Balansa clover contains low levels of plant oestrogens.

ID Kangaroo Island trials (1974-76) winter yields of balansa clover were an average of 40% lower than Trikkala, whereas spring yields were approximately 35% higher than Trikkala. At Gybybolite balansa clover has demonstrated excellent persistence in continuously grazed pastures. In both districts balansa clover has produced good quality hay.

Balansa clover is an aerial seeding species capable of good seed yields. The species commences flowering at a similar time to Mt. Barker sub-clover and continues to flower for up to eight weeks. Mature seed is produced fairly rapidly after flowering commences. Despite its tendency to shatter readily, seed yields of up to 600 kg/ha have been obtained in trial work. The species produces approximately 1.4 million seeds/kilogram, with a hard seed content of approximately 70%. The seed of balansa clover is readily harvested using conventional equipment.

In addition to its tolerance to clover scorch, balansa clover has a high level of tolerance to the blue-green, pea and spotted alfalfa aphids.

It appears to be equally susceptible to red-legged earth mite as sub-clover.

Balansa clover nodulates effectively with commercial sub-clover inoculum.

Despite only moderate seedling vigour, balansa clover has demonstrated an ability to establish readily and compete strongly with existing pasture plants. A characteristic of this species is its ability to spread rapidly and colonize in nearby paddocks. It appears to be well adapted to red-gum soils of the South-East of South Australia and the poorly drained lateritic soils of Kangaroo Island. However it has performed poorly on the alkaline rendzina soils and the siliceous and alkaline sands of the South-East of South Australia. Further testing in a wide range of environments will occur in 1984-85.

Reference

1. Beale, P.E. and Crawford, E.J. (1975) - Assessment of *Trifolium* species and other annual pasture legumes with particular reference to tolerance to *Kabatiella caulivora*. *Agric. Record* 2, 54-59.