Glycine latifolia - A native legume with potential

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Glycine latifolia is a native perennial legume. It has a summer growth with a twining habit. A mass of dense foliage, up to 2 m^2 can be produced from one plant in a 12 month period. This is usually a mixture of rooted stolons, generating new crowns, and daughter plants germinating as a result of seed production between October and April. The plant has purple flowers, occurring on racemes. The pods are 2-6 cm and the seeds large (9 – 12 g/100 seeds).

Glycine latifolia is free from major pests and diseases. A mosaic virus infects a small proportion of plants but did not appear to spread in a mixed pasture over a 12 month period in the Trangie district.

Where does it grow?

Glycine latifolia occurs naturally in NSW on the north coast, north western and central western slopes and plains and in Queensland (Harden 1991). It is adapted to clay soils carrying native grasslands of these regions but is also found on sandy soils under woodlands. It grows in the 500-1200 mm rainfall belt and is drought tolerant (Rees *et al.* 1993).

Possible uses

Cereal cropping in the wheat/sheep belt of NSW relies on pasture ley to sustain grain quality. *Glycine latifolia*, with its stoloniferous rooting, good seedling recruitment and ability to survive low soil moisture and water logging, would fit this role.

Inclusion of *Glycine latifolia* in a permanent pasture would increase native species diversity as well as providing useful fodder for livestock. Data from work at Trangie suggests the growing season of *Glycine latifolia* extends-into summer further than lucerne. Its leaf:stem ratio is also high (2:1), indicating production of high quality feed.

When can it be planted?

In central western NSW *Glycine latifolia* has been successfully planted into stubble in November-December and into a cultivated seed bed in February-March. However the latter sowing date means limited plant growth until temperatures rise in the spring of that year.

The local experience - Trangie and Rawsonville

Glycine latifolia has been established at both these sites and its growth has been compared with lucerne (cultivars Pioneer L52 and Aurora) and another subtropical legume *Desmanthus virgatus*. Glycine's growth is less than lucerne in spring and early summer but is greater than lucerne in late summer. Over a 12 month period *Glycine* had greater dry matter production than *Desmanthus*. This is the furthest south this legume has been evaluated. *Glycine latifolia* appears to have high dry matter production and a growth pattern that would help extend the production period if mixed with lucerne in a pasture.

References

Harden, G. J (Ed.) (1991) Flora of New South Wales Volume 2 New South Wales University Press: Sydney.

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