

Register of Australian Herbage Plant Cultivars

B. Legumes

2. Desmodium

Desmodium uncinatum (Jacq.) DC. (desmodium) cv. Silverleaf

Reg. No. B-2a-1

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Origin

Derived from seed introduced by CSIRO in 1944 (C.P.I.8990) from the Division of Agrostology, Institute of Animal Biology, Deodora, Brazil. Tested in south-eastern Queensland and north-eastern New South Wales during the 1950s and early 1960s by CSIRO (1,6), the Queensland Department of Agriculture and Stock (9), and the New South Wales Department of Agriculture (12), it was named and released by the Queensland Pasture Liaison Committee for commercial use in 1962.

Morphological description

A large trailing and scandent perennial which roots at the nodes on sandy loams and other friable soils; tap roots thicken up to 1 cm or more. Stems cylindrical or triangular, densely covered with short light brown hooked hairs, spreading to 5 metres, and with an internode length of 3-15 cm and diameter of 2.5-4.0 mm. Leaves alternate, trifoliate; petioles 2.5-8.0 cm long. Leaflets ovate, entire; the central one 5-10 cm long by 2.5-5.5 cm wide; the laterals 4-8 cm long by 2-4 cm wide, the ratio of leaflet length to width approximately 2 : 1; the upper side dark green with an irregular generally pyriform silvering about the midrib, the lower side lighter green and uniform in colour, both covered with whitish hairs. Stipules short, brown, caducous. The inflorescence is a fairly open raceme on a peduncle approximately 50 cm long, with flowers in pairs. Flower 0.8-1.0 cm, pale lilac to pink. The pod is a sickle-shaped lomentum, 5-7 cm long, covered with hooked hairs, very adhesive to animals and clothing, readily breaking into 4-8 segments; dehiscence along the lower suture. Seeds mainly light brown with mixture of olive-green to cream, sub-reniform to triangular or deltoid and flat in shape, approx. 200,000-220,000 per kg. Chromosome number $2n = 22 (7)$.

Agronomic characters (6,7,9,12,14)

Silverleaf is summer-growing and best adapted to rainfalls above 890 mm. Will stand light frosts; heavy frosts will cut to ground level but not kill the crown.

Establishment and growth during the first year are slow but thereafter yields of about 5017 kg of dry matter and 336 kg of seed per ha may be produced. In southern Queensland and northern New South Wales a moderate peak of growth occurs in early summer and a marked peak in late summer-early autumn; a depression of growth occurs in mid summer whenever insolation and temperature are high and moisture supply is low. It makes somewhat more rapid growth in early spring than Siratro or the glycines. Abundant leaf fall and runner decay provide a deep duff layer under the plants. Flowering occurs in response to short days in mid April when vegetative growth ceases. Selfing of the flowers can take place but cross pollination is important for satisfactory seed set (10). Seed matures about mid June when the branches die back. It will grow on a wide range of soils and requires inoculation with specific *Desmodium* inoculant. The recommended strain of *Rhizobium* is CB627 (13).

It is intolerant of salt and intermediate in its response to Mn and A1 excess (2). Critical values are $P = 0.23\%$ (3) and $K = 0.80\%$ (4).

Silverleaf is more persistent and productive under fairly lenient grazing and on reasonably well drained soils (8); intensive stocking for short periods causes considerable runner damage. Palatability is not high and stock take a little time to get used to it. It combines well with a wide range of summer-growing grasses, from sward-formers like *Paspalum notatum* to erect types such as *Setaria sphacelata* and *Paspalum plicatum* (1). It is very susceptible to little leaf virus (11) but recovers rapidly under favourable conditions; it is severely attacked by the Amnemos weevil (*A. quadrituberculatus*) in northern New South Wales (5).

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