

Register of Australian Herbage Plant Cultivars

B. Legumes

3. Lablab-Macrotyloma

Macrotyloma axillare (E. Mey) Verdc. (syn. *Dolichos axillaris* E. Mey. (perennial horse gram) cv. Archer

Reg. No. B-3b-1

Registered prior to September 1967

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Origin

Derived without selection from seed samples C.P.I.17814 and 28696, both of which were introduced from the Grassland Research Station at Kitale in Kenya. These introductions were identical and both bore the designation K5049 at Kitale (5). C.P.I.17814 performed well in trials at the Grafton Experiment Station in New South Wales during 1959 and 1960, where it was observed to be one of the most persistent legumes on occasionally grazed Rhodes grass plots (3). In CSIRO nursery trials during 1960-63 at Samford in Queensland, C.P.I.17814 and 28696 proved vigorous and high-yielding, gave quick cover, and held their leaves until frosted (8). C.P.I.28696 was tested at Brian Pastures, Kairi, Biloela, and more extensively at Cooroy by the Queensland Department of Primary Industries. It was found to give satisfactory yields and to be very tolerant of drought (2,6). It was given the name Archer by the Queensland Herbage Plant Liaison Committee and released for commercial use in September 1966. Registered September 1967 on the recommendation of the Queensland Herbage Plant Liaison Committee.

Morphological description (4)

Trailing and twining perennial herb with cylindrical stems, pubescent with appressed hairs. Leaves trifoliate. Stipules up to 5 mm long, not striate. Petioles 2-4 cm long. Leaflets ovate to subrhomboidal, rounded to subacute at the base, acute to somewhat rounded mucronulate at the apex, 3-5 cm long, 2.5-3.5 cm wide, about 1.5 times as long as broad, pubescent on both surfaces, slightly glossy above, paler beneath, with 5-6 distinct lateral nerves. Flowers greenish yellow, 14-15 mm long, in short, axillary, 2-6 (usually 3)-flowered racemes on peduncles 2 mm long; calyx pubescent, the tube about 2 mm long, the lobes acuminate, a little longer than the tube, the upper two almost completely united; standard oblong, auriculate at the base about 13 mm long, 10 mm broad, with 2 linear appendages approximately 5 mm long, wings as long as the keel, about 12 mm long; ovary with appressed white hairs and stigma surrounded by a ring of short dense hairs. Pod shortly stipitate, 3-5 cm long, about 7 mm broad, pubescent, with a point up to 7 mm long. Seeds 3-4 mm long, 2.5-3 mm broad, subovoid, laterally flattened, 5-9 (usually 7 or 8) per pod, mottled light and dark, hilum central, approx. 88,000 per kg.

Agronomic characters (1,2,6,7)

Cv. Archer is summer-growing and best adapted to a frost-free subtropical or tropical environment with 1016 mm or more annual rainfall. It has, however, a high degree of drought tolerance; it will survive in districts with a very dry 8-month winter-spring season and during hot dry spells in summer. It is adapted to a variety of soil types provided they are well drained for it will not stand waterlogging. It is nodulated satisfactorily with indigenous bacteria in most Queensland soils but may be a little more *Rhizobium*-specific than Leichhardt.

In early spring (September) when moisture and/or temperature conditions still limit the growth of most other legumes, Archer will come away quickly. In the year of establishment flowering tends to be late; early January plantings commence to flower about mid April and early February plantings in early June. However, several more months are required to obtain significant amounts of mature pod. Flowering and seeding may continue until the plants are frosted, or in frost-free areas continue

throughout the winter and early spring. The pods shatter readily and seeds are relatively hard. Seed yields of 207 kg per ha have been obtained and up to 560 kg per ha appear possible. It grows well in association with tall grasses and is strongly competitive with weeds. It is dispersed in cattle dung and stands may thicken up from self-sown seedlings.

It is palatable to stock but they may need to become accustomed to it. It recovers rapidly from grazing and from frosting. Its main virtues are its ability to start growth early in spring, to continue production late in the season, and to tolerate drought. It is reported as the best legume for old, infertile, weed-infested cultivation areas in the Cooroy district.

Cv. Archer is remarkably free from pests and diseases. The only major disease reported to date is legume little leaf virus which is only severe under very dry conditions, particularly when recovering from frosting. Appears fairly resistant to *Amnemus* weevil and is resistant to the powdery mildew (*Sphaerotheca fuliginea*) which attacks cv. Leichhardt.

References

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