Register of Australian Herbage Plant Cultivars

A. Grasses
7. Paspalum
Paspalum notatum Flugge. (Bahia grass) cv. Competidor

Reg. No. A-7c-1
Registered December 1986

Published in the Journal of the Australian Institute of Agricultural Science 53 (3) 218-19. 1987

Origin

Introduced in 1953 from the United States by the New South Wales Department of Agriculture as Argentine Bahia grass. Accessioned as Kf.88 and later P.1308. Original source of seed unknown.

Competidor was found to be higher yielding, more palatable, more shade tolerant and later flowering than commercial Pensacola Bahia grass at Grafton Agricultural Research Station and at sites throughout the Clarence River region. Competidor was a much better pasture grass than carpet grass *Axonopis affinis* Chase, on soils of moderate to low fertility. However, being an aggressive grass, its development was delayed pending commercial availability of compatible legumes such as *Aeschynomene falcata* cv. Bargoo and *Stylosanthes guineanensis* var. *intermedia* cv. Oxley.

Competidor is naturalised over a limited area adjacent to old experiment sites in the Clarence region. Pensicla Bahia grass is naturalised over a considerable area of the North Coast of New South Wales and South Coast of Queensland.

Submitted by the New South Wales Department of Agriculture and recommended for registration by the New South Wales herbage Plant Liaison Committee. Breeders' seed will be maintained at Grafton Agricultural Research Station, New South Wales Department of Agriculture. Registered in December 1986.

Morphological description

Mat-forming perennial arising from short, stout, woody, horizontal rhizomes. The bases of old leaf sheaths persist on the rhizomes. Culms unbranched, 15-50cm (occasionally to 1m) tall, flattened, nodes dark-coloured. Leaves crowded at the bases of the culms, the overlapping sheaths tending to reach a common height, with blades stiffly spreading above, glabrous or hairy, usually some long hairs near the blade sheath junction; sheaths compressed, keeled, glossy; ligule a membranous rim with a row of dense white hairs about 1mm behind it; blades flat,linear, folded at the base, 2-39cm long, 3-10mm wide. Inflorescence composed of two (rarely 3) racemes barely separated by a common axis about 5mm long; racemes 2-12cm long, bearing spikelets singly in two rows on a narrow rachis about 1mm wide, glabrous, becoming increasingly flexuous towards the tip. Spikelets plumply plano-convex, broadly ovate 2.5-3.8mm long; glume and sterile lemma as long as the spikelet, glabrous, firm in texture; fertle lemma finely striate, pallid at maturity. (Chase, A. 1929. Contributions from the United States National Herbarium **28** (1), 64-6).

Competidor may be distinguished from Pensacola Bahia grass in having broader leaves, less upright growth habit under grazing and larger spikelets (and therefore seeds). Leaf blades glabrous under favourable seasonal conditions, otherwise quite pubescent. Seeds of Competidor are about 3.5mm long and about 2.5mm wide, straw coloured and approximately 250,000 to 308,000/kg.

Agronomic characters

Summer growing with moderate degree of frost tolerance. Adapted to a wide variety of soils under humid subtropical conditions with rainfall 750-1200mm. Best adapted to moist sandy soils. Suited to upland and lowland areas. Competidor is highly competitive but combines with Bargoo jointvetch and Oxley fine-stem Stylo to form a suitable pasture of low fertility soils. Also compatible with white clover on moist fertile soils if grazed almost constantly. It withstands heavy grazing and is sufficiently aggressive to eliminate most weed competition. Tolerates dry spring conditions better than carpet grass. Competidor is very shade tolerant, and may be useful for agroforestry in subtropical coastal New South Wales and Queensland. It does not produce a large amount of combustible stem and leaf litter, as do most other subtropical grasses. It tolerates controlled burning during winter and spring but can be damaged by the intense heat of an uncontrolled summer grass fire.

Compared with commercial Pensacola, Competidor produced fewer seed heads and is more palatable and more shade tolerant. In northern New South Wales, the florets of Competidor are not infected by the ergot fungus, *Claviceps paspali* Stev. and Hall, which damages commercial Argentine Bahia grass in the United States (Chamblii, C.G. and Jones, D.W. 1981. Bahia grass. Florida Co-op Ext. Service, Univ. Florida. Circlar 321B, 1-9. Killinger, G.B., Ritchley, G.E., Blickensderfer, C.B, and Jackson, W. 1951. Argentine Bahia grass. Univ. Florida Agricultural Exp. Stn. Circular S.31). Neither Competidor nor Argentine became infected when sprayed with suspensions of NSW ergot race under glasshouse conditions; *P. dilatum* Poir. was massively infected (Priest, M. 1984. pers. comm., NSW Dep. Agric., Rydelmere). Competidor herbage is free of serious insect pests and diseases but ripening seed crops are attacked by Eastern Rosella parrots and mature seed is very attractive to mice and rats. In north-eatern New South Wales, flowering commences in January-February and seed matures from mid-February to early April. The crop is readily harvested with a header; seed yields rarely exceed 150kg/ha.

Competidor is also suitable as a low maintenance turf grass for heavily utilised areas and is a particularly good roadside grass. However, its coarseness renders it a weed of fine turf In hilly, subtropical fruit orchards, Competidor may be useful for preventing erosion and controlling weeds. It competes strongly with weeds, but spreads laterally at a much slower rate than kikuyu grass and couch grass, and requires less frequent mowing.

Acknowledgment

Thanks are extended to Mrs J.L. Wheeler, Armidale, for preparing the botanical description of the species and the cultivar.

Selected by Mr.G.P.M. Wilson, NSW Department of Agriculture, Agricultural Research and Advisory Station, Private Mail Bag, Grafton, NSW 2460.