on accessions ranged from 0 to more than 100 galls/plant. The generally higher gall numbers in the field may be because the plants were much older than those in the glasshouse. However, accessions 3669, 3671, 3672, 3675, common to both trials showed similar numbers of galls/plant. The range of reaction types of *D. heterocarpon* to *M. javanica* can now be extended to include very susceptible to very resistant types.

Forty-three of the 56 accessions had gall ratings of 2 or less, the level considered by the International Meloidogyne Project to represent a practical amount of resistance. Although this should be verified by measuring nematode reproduction, there seems to be a large number of accessions which could be productive in *M. javanica*-infested soil.

When gall rating was compared with herbage symptom rating and % ground cover for all accessions, all pairs of parameters were significantly correlated. This suggests that the symptoms measured and reduced plant vigour were caused by the nematode infestation and that one parameter may be estimated by measuring one of the other two. It would be preferable to assess above-ground symptoms as it is non-destructive. In several cases, however, this could lead to errors in evaluation and to rejection of valuable resistant material. For example, accessions 3790, 3787, 3811, 13170 and 13175 had very few galls but high symptom rating, and low ground coverage. If selection were based on above-ground symptoms only, these resistant accessions would have been rejected. Evaluation of root damage by *M. javanica* on *D. heterocarpon* must be made by examination of the roots. All accessions with low symptom rating and good plant growth had few galls on the roots. This material, therefore, would not have been misinterpreted as being susceptible by using above-ground evaluation alone. This situation may change, however, with other *D. heterocarpon* accessions or under different environmental conditions.

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NEW RELEASE OF PASTURE PLANT

GRASS
Setaria

Setaria sphacelata (Schumach.) Moss
var. *sericea* (Stapf) Clayton
(setaria)

cv. Solander
(Reg. No. A-8a-5)

Origin

Solander was selected from a population derived from crosses between frost tolerant accessions CPI 32930 and 33452 and the more robust frost-susceptible accessions CPI 19915, CPI 16413 (an off-type) and var. *splendida* CPI 15899. The accessions contributed 16, 34, 18, 24 and 8% of the germplasm of the F_1 generation respectively. Selection for winter yield and winter greenness were imposed during the F_2 and F_3 generations; the selected parents for each generation were inter-crossed in isolation. Three F_4 populations were sown as swards at two sites in comparison with existing cultivars. Seasonal yield and components of seed production were measured over several seasons. All three populations were markedly superior in seed production to the frost tolerant cultivar Narok (2). One population was selected on the basis of high seed production following a further trial in which the superior seed production attribute was confirmed (3).

Submitted by the breeder, Dr J. B. Hacker, CSIRO Division of Tropical Crops and Pastures, Queensland, and recommended for registration by the Queensland Herbage Plant Liaison Committee. Stocks of breeders' seed will be maintained by the CSIRO Division of Tropical Crops and Pastures. Registered July 1985.

Morphological description

Robust leafy perennial with flowering stem to 1.8 m tall. Leaves bluish green, largely basal but some cauline, up to 17 mm wide, 0.55 m long, more or less erect in a flowering sward, glabrous or with a few long hairs on the upper surface towards the base of the blade. Leaf sheaths glabrous or sparsely hairy, strongly flattened on vegetative tillers.

Inflorescence 60–260 mm long, the bristles chestnut-coloured or grey; stigmas purple or sometimes white.

Not readily distinguished from cv. Narok, from which it differs primarily in the much higher frequency of plants with grey-bristled inflorescences (*c.* 50%, compared to < 10% in Narok).

Chromosome number: $2n = 4x = 36$.

Agronomic characters (1,2,3)

Summer dry matter yield equals or exceeds that of the commercial cultivars Nandi, Narok and Kazungula (6.0–8.0 tonnes DM ha^{-1} from November to April inclusive in south-east Queensland). Winter yield equals that of Narok, and exceeds that of Kazungula by a factor of four.

Winter-greenness is closely comparable to that of Narok and during two winters negligible leaf damage occurred following frosts of −2.0 and −3.5 °C, when Nandi and Kazungula suffered 60–70% leaf kill (1).

The particular merit of Solander is its superior seed production (2). Narok has poor seed production due to low density and proportion of flowering tillers. The proportion of flowering tillers in Solander is twice that of Narok leading to a doubling of seed production (2,3). This advantage is largely independent of season of harvest, age of stand and level of applied nitrogen fertilizer (2).

The improvement in proportion of flowering tillers in Solander has not resulted in a decrease in percentage of leaf.

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