

Preserving an indigenous cultivar

A particular strain of mung bean (locally known as sona moog) has long been famous in Bengal as a pulse endowed with unusually pleasant flavour and taste. Recently, in collaboration with A. Goswami (Indian Statistical Institute, Kolkata), we completed a project of the Rashtriya

Krishi Vikas Yojana, Government of West Bengal on chemical characterization of this bean such as lipids, proteins, etc.¹. Brahmachary and Ghosh² had earlier identified the aroma molecules of this bean. It was observed that 2-acetyl-pyrroline (2-AP) is one of the compounds

responsible for the aroma of sona mung bean. Other aroma compounds besides 2-AP have also been identified. As nature uses similar molecules for different purposes, it was found that 2-AP was also one of the aroma compounds for the aroma of basmati rice³ and tiger pheromone^{4,5}. Gure (unpublished) has now furnished us with the results of the DUS (Distinctness, Uniformity and Stability) test on this bean and the data over three years are in concordance (Table 1).

The Government of India should now take steps to prevent patenting of this bean by any foreign country/company as had happened in the case of Texmati, an attempted biopiracy of Basmati. The farmers should be encouraged to increase production of this bean now restricted to a narrow area of Malda, West Bengal, so as to meet the demand of both eventual export and domestic consumption.

Table 1. Results of distinctness, uniformity and stability test conducted on mung bean (*Vigna radiata*) variety-NA (local variety from Bhutnir Char, Maldah district) conducted at Barogram, Dulopur, Howrah

Characteristics	States	Note	Stage of observation	Type of assessment
Hypocotyl: anthocyanin colouration	Absent	1	Cotyledons unfolded	VS
Time of flowering	Early	3	50% plants with at least one open flower	VG
Plant: growth Habit	Erect	3	50% flowering	VG
Plant: habit	Determinate	1	50% flowering	VG
Stem: colour	Green	1	50% flowering	VG
Stem: pubescence	Present	9	50% flowering	VG
Leaflet: lobes (terminal)	Present	9	50% flowering	VG
Leaf: shape (terminal)	Ovate	2	50% flowering	VG
Leaf: colour	Green	1	50% flowering	VG
Leaf: vein colour	Greenish-purple	2	50% flowering	VG
Petiole: colour	Green	1	50% flowering	VG
Leaf: size (at fifth node from the base)	Medium	5	50% flowering	MS
Flower colour of petal (standard)	Light yellow	3	50% flowering	VG
Pod: colour of premature pod	Green	1	Fully developed green pods	VG
Pod: pubescence	Present	9	Fully developed green pods	VS
Pod: position	Intermediate	2	Fully developed green pods	VG
Plant: height	Medium (50–70 cm)	5	Fully developed green pods	MS
Pod: colour	Brown	1	Harvest maturity	VG
Pod: curvature of mature pod	Straight	1	Harvest maturity	VG
Pod: length (mature pod)	Short (<8 cm)	3	Harvest maturity	MS
Seed: colour	Yellow	1	Mature seeds	VG
Seed: lusture	Dull	2	Mature seeds	VG
Seed: shape	Oval	1	Mature seeds	VG
Seed: size (weight of 100 seeds)	Small (<3 g)	3	Mature seeds	MG

Note: Same results were obtained in three consecutive years of testing (2011, 2012, 2013).

Type of assessments – MG, Measurement by a single observation of a group of plants or parts of plants; MS, Measurement of a number of individual plants or parts of plants; VG, Visual assessment by a single observation of a group of plants or parts of plants; VS, Visual assessment by observation of individual plants or parts of plants.

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