



Gujarat Isabgol-3: a promising cultivar of Isabgol

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ABSTRACT

Isabgol (*Plantago ovata* Forsk.) is cash crop, commercially known as 'Ghodajira' in Gujarat. Which is grown in *Rabi* season. In Gujarat, two varieties viz., Gujarat Isabgol 1 and Gujarat Isabgol 2 have been released in 1975 and 1987, respectively and popular in the farmer's field. The productivity of Isabgol among the farmers was remained stagnant due to low yield potentiality of these varieties. The industrial demand of raw material i.e. Isabgol seeds is increasing day by day. To meet the demand of industry and increase in productivity, the varietal improvement programme of Isabgol was undertaken at Centre for Research on Seed Spices, S. D. Agricultural University, Jagudan. The promising genotypes of Isabgol were evaluated from germplasms and experiments were carried out during eight consecutive years. Based on the quality and yield potentiality the genotype JI 26 (GI3) recorded 1324 kg/ha yield and showed its superiority by producing 11.35 per cent higher than GI 2. The yield potential of JI 26 (GI 3) is 1632 kg/ha. The spikes of GI 3 are long, thin and dark green leaf, profuse tillers and has high stable yield. It possesses more number of seeds per spike and better grain quality. The GI 3 was recommended for commercial production in the 36th Gujarat State Seed Sub-Committee Meeting.

KEY WORDS : Isabgol (*Plantago ovata* Forsk.), Varietal improvement, Yield potentiality

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INTRODUCTION

Isabgol (*Plantago ovata* Forsk.) is cash crop, vernacularly known as 'Ghodajira' grown in *Rabi* season. The seeds of which are valued for mucilaginous rosy white husk used against constipation, irritation of digestive tract due to good sources of soluble fibre and is supposed to help in controlling blood pressure and lowering cholesterol. In addition, it is used for food industries in various preparations. Isabgol seed is separated from husk, gola, lali and khakho during processing. The gola and lali have nutritional value which improve cattle food product. The khakho can be used for reducing the seepage losses (Singh *et al.*, 2005). India is the leader in Isabgol production and largest export of seeds and husk. India is the world's largest producer and exporter of Isabgol and considered as sole producer of isabgol in the world. In India, Isabgol having major belt spread from semi arid to arid covering larger area in Rajasthan and Gujarat. India ranks first in

Isabgol production (around 1 lakh tones) in world than Pakistan. Gujarat grows isabgol in 24199 hectares and produces about 26092 M.T. with a productivity of about 1078 kg/ha (Anonymous, 2010a). The major area (95%) falls in Banaskantha, Kutchh and Patan districts of North Gujarat. The share of Gujarat in an area and production in the country is about 30 to 35 per cent. About 90 % of the country's production is exported and India is earning more than 200 crores rupees foreign exchange (Anonymous, 2010b). In Gujarat, two varieties viz., Gujarat Isabgol-1 and Gujarat Isabgol-2 have been released in 1975 and 1987, respectively and popular among farmers but productivity remained stagnant. So as to improve the productivity concerted efforts made at main spices research station, GAU led to identification of Gujarat Isabgol 3.

MATERIALS AND METHODS

Low yield potential of present day varieties, Low yield potential is the major constraints in Isabgol crop. Keeping this in view, the breeding programme was concentrated on developing varieties with high yield potential and better seed quality. Selection plays a predominant role in crop improvement and most of the high yielding genotypes are selected from germplasm material. Chandra (1967)

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