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Effect of date of sowing and nitrogen on growth and yield of Isabgol (*Plantago ovata*)

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Plantago ovata commonly known as Isabgol, Psyllium or Indian plantago seed husk has the property of absorbing and retaining water which accounts of its utility in checking diarrhea. Isabgol is diuretic; it alleviates kidney and bladder complaints, gonorrhea and haemorrhoids. The seed husk is also effective in reducing serum cholesterol level. India dominates the world market in the production and export of psyllium. India provides approximately 80 percent of the psyllium available in the world market. India is the largest producer of Isabgol and exports seed and husk worth Rs 25 million annually. Psyllium husk is exported in USA, UK, France, Germany, Japan, Indonesia, Canada, Mexico, Sweden, Spain, Norway, Italy, Australia Denmark, Korea, Pakistan and Gulf countries. 60% of world demand is consumed by USA. Other countries share is 25% and share of domestic market of India is 15% of world demand. About 90% of the gross production of Isabgol in India is exported, with nearly 93% of the export being of husk. In India, Gujarat and Rajasthan are the major producers of psyllium.

The field experiment was conducted at Herbal Garden, Acharya N. G. Ranga Agricultural University, Rajendranagar, Hyderabad during the year 2007-2008 to study the Effect of date of sowing and nitrogen on growth and yield of Isabgol (*Plantago ovata*). The experiment was laid out in randomized block design with factorial concept. Among the different sowing dates, sowing on 5th October proved to be superior over other sowing dates in respect to plant height (42.34 cm), number of tillers per plant (12.26), dry weight of plant (5.05 g) and seed yield per hectare (5.49 q/ha). Among the different levels of nitrogen applied to Isabgol, application of 100 kg/ha recorded higher plant height (34.58 cm), greater number of tillers per plant (10.34), higher dry weight of plants (4.78 g), spike length (4.44 cm) and seed yield per hectare (41.10 q/ha). The interaction between sowing dates and nitrogen levels revealed that the plant height (44.27 cm), number of tillers per plant (13.06), dry weight of plant (7.23 g), spike length (6.20 cm) and seed yield per hectare (5.64 q/ha) were maximum on 5th October sowing in combination with application of 100 kg N/ha over other treatment combinations. The percentage of husk did not differ significantly because of different sowing dates. The present study revealed that 5th October sowing in combination with 100 kg N/ha recorded higher yield over all other treatments.

Biography

G. Satyanarayana Reddy graduated from Allahabad Agricultural Institute India in 1980. He has done his Ph.D. in Plant Tissue Culture from ANGR Agricultural University Hyderabad, India in 2002. Presently, he is the Principal Scientist and Head of Medicinal and Aromatic Plants Research Station, Dr YSR Horticultural University India.

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