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Genotypic evaluation of guar (Cyamopsis tetragonoloba L.) for protein, gum and seed yield traits

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Guar (*Cyamopsis tetragonoloba* L.) being an important legume is mainly utilized as vegetable crop. Currently, it is gaining importance in industry as guar gum due to higher galactomannan content in the seed endosperm. Apart, the crop is rich in protein content (24-28%) and thus it can be used as a good protein source. Developing good genotypes for the vagarious climatic condition is important. In view of this, to provide raw materials for the industries, an experiment was conducted during 2013 and 2014 at GKVK, Bengaluru, India to evaluate good guar genotypes for protein, gum and seed yield traits. The experiment was laid out in split-split plot design consisting of three dates of sowing in main plots (July first fortnight, July second fortnight and August first fortnight), 2 spacings (30 cm x 15 cm and 45 cm x 15 cm) in sub-plots and 4 genotypes (HG-563, HG-365, RGC-1006 and Tulsi) in sub-sub plots and was replicated thrice. Results indicated that among the genotypes, the genotype HG-563 recorded significantly higher protein content of 26.35% over other genotypes and lower protein content of 24.51% was recorded with Tulsi genotype. The same genotypes also recorded higher and lower protein yield of 178.1 and 112.5 kgha⁻¹, respectively. Similarly, the genotype HG-563 recorded significantly higher gum content and yield of 30.28% and 204.7 kgha-1, respectively. The higher protein and gum yield was mainly attributed to better growth components, which helped in better translocation of photosynthates from source to sink lead to higher protein in seeds. Significantly higher seed yield of guar was registered with HG-563 (676 kgha-1) as compared to Tulsi genotype (459 kgha-1). The genotype HG-563 exhibited higher genetic potentiality by utilizing the available growth resources.

Biography

KRISHNAMURTHY, N., Presently Serving as **Dean (Post Graduate Studies), University of Agricultural Sciences**, Bangalore. Served the University for 38 years in various capacities as Researcher, Extension Specialist, Chief Agronomist, Professor(Head), University Head (Discipline of Agronomy). Published more than 60 research papers, 3 books and prepared many UG Laboratory manuals. Guided 14 M.Sc.(Agri.) & 9 Ph.D students as Chairman, member for 37 M.Sc.(Agri.) & 19 Ph.D students. Academic referee for many standard scientific journals. Visited many countries; Indonesia, The Netherlands, Turkey, Malaysia, London, France, Brussel, Belgium, Hamberg, Germany and Presented scientific research papers in the International conferences. He served as Chairman (Technical Committee), Biodiversity Board, Chairman (Knowledge Enhancement Committee), Institute of Agricultural Technologies, Vice-President & Secretary (Alumni Association) and as member in many selection committee of Government and public undertakings for various technical posts and also life member for many scientific journals.

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