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Variability Parameters for Growth and Yield Characters in Fenugreek, Trigonella spp. Genotypes

Authors : Anita Singh, Richa Naula, Manoj Raghav

Abstract : India is a leading producer and consumer of fenugreek for its culinary uses and medicinal application. In India, most of the people are of vegetarian class. In such a situation, a leafy vegetable, such as fenugreek is of chief concern due to its high nutritional property, medicinal values and industrial uses. One of the most important factors restricting their large scale production and development of superior varieties is that very scanty knowledge about their genetic diversity, inter and intraspecific variability and genetic relationship among the species. Improvement of the crop depends upon the magnitude of genetic variability for economic characters. Therefore, the present research work was carried out to analyse the variability parameters for growth and yield character in twenty-eight fenugreek genotypes along with two standard checks Pant Ragini and Pusa Early Bunching. The experiment was laid out in Randomized Block Design with three replication during rabi season 2015-2016 at Pantnagar Centre for Plant Genetic Resources, G.B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand. The analysis of variance revealed highly significant differences among all the genotypes for all traits. High genotypic and phenotypic coefficient variation were observed for characters, namely the number of primary branches per plant, number of leaves at 30, 45 and 60 DAS, green leaf yield per plant, green leaf yield q/ha . The genetic advance recorded highest in green leaf yield q/ha (33.93) followed by green leaf yield per plant (21.20g). Highest percent of heritability were shown by 1000 seed weight (99.12%) followed by the number of primary branches per plant (97.18%). Green leaf yield q/ha showed high heritability and high genetic advance. These superior genotypes can be further used in crop improvement programs of fenugreek.

Keywords : genetic advance, genotypic coefficient variation, heritability, phenotypic coefficient variation
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