

## Mean performance and genetic variability in chilli (*Capsicum annum* L.)

■ N. JABEEN, S. MUFTI, S.H. KHAN, K. HUSSAIN, TASADUK SHAFI AND SONAM SPALDON

### SUMMARY

The present investigation was carried out at the experimental field of Division of Olericulture, SKUAST-K, Shalimar during *Kharif* 2009. The experimental material consisted of ten genotypes, raised in a plot size of 2.4 m x 1.8 m at a spacing of 45 x 30 cm in RBD design with three replications. Observations were recorded from ten randomly selected plants of each genotype in each replication on various characters *viz.*, plant height (cm), plant spread (cm), number of branches per plant, number of fruits per plant, fruit length (cm), fruit breadth (cm), number of seeds per fruit, average fruit weight (g), fruit yield per plant (g) and fruit yield (q/ha). Significant differences were observed for all the characters under observation. Maximum fruit yield per plant and per hectare were recorded by PC-2062 (674.90 g) and 307.36 q, respectively followed by LCA-206 (631.53 g and 292.36 q, respectively) and LCA-436 (628.77 g and 291.09 q, respectively) while minimum by Bydagi dabbi (314.57 g and 145.63 q, respectively). The value of genetic gain were high for all the characters under study, the heritability indicating predominance of additive gene effects for all the characters under study. Hence, it appears that selection for all the characters may result in the development of superior genotypes with maximum emphasis initially on fruit breadth with highest genetic gain (65.15) followed by fruit length (64.43), number of seeds per fruit (60.63), fruit yield per plant (59.35), fruit yield per hectare (58.97), number of branches per plant (58.73), number of fruits per plant (54.38), plant spread (42.67), plant height (35.50) and average fruit weight (16.47).

**Key Words :** Chilli, Performance, Genetic variability, Temperate conditions

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Chilli (*Capsicum annum* L.) is one of the main solanaceous crop which is indispensable vegetable and spice crop grown for its green and red ripe fruits. Presently it is gaining more importance in the global market because of its value added products like chilli powder, oleoresin and colouring matter. It is a commercial spice of India as well as Kashmir. Chilli is mainly used in culinary adding flavour, colour, vitamin (A and C) and pungency due to capsaicin which is known to

be stimulant, attractive, rubefaciant, carminative and anticoagulant. Considering its importance, the present investigation was carried out under AICRP to know the mean performance and genetic variability and adaptability of crop under Kashmir conditions.

### MATERIALS AND METHODS

The present investigation was carried out at the experimental field of Division of Olericulture, SKUAST-K, Shalimar during *Kharif* 2009. The experimental material consisted of ten genotypes, raised in a plot size of 2.4 m x 1.8 m at a spacing of 45cm x 30 cm in RBD design with three replications. All the recommended package of practices were followed for raising the crop. Observations were recorded from ten randomly selected plants of each genotype in each replication on various characters *viz.*, plant height (cm), plant

#### MEMBERS OF THE RESEARCH FORUM

##### Author to be contacted :

N. JABEEN, Division of Olericulture, Sher-e-Kashmir University of Agricultural Sciences and Technology (K.), Shalimar, SRINAGAR (J.& K.) INDIA  
E-mail: nayeema\_jabeen@yahoo.co.in

##### Address of the co-authors:

S. MUFTI, S. H. KHAN, K. HUSSAIN, TASADUK SHAFI AND SONAM SPALDON, Division of Olericulture, Sher-e-Kashmir University of Agricultural Sciences and Technology (K.), Shalimar, SRINAGAR (J.& K.) INDIA