

Genetic variability and association of component characters for yield in chili

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SUMMARY

Twenty seven genotypes of diverse origin of chili [*Capsicum annuum* (L.)] were planted in RBD with three replications to work out variability, heritability and correlation association for fruit yield and nine other related characters. High GCV, high heritability along with genetic advance observed for number of fruits / plant indicated that number of fruits / plant may be governed by additive genes. Fruit yield was positively associated with no. of branches / plant and no. of fruits / plant. Number of branches / plant is also positively correlated with fruit width, no. of fruits / plant, capsaicin content and fruit yield. Though selection for improvement of fruit yield is possible through positively associated yield contributing characters. However, these characters are influenced by environment. Therefore, selection of genotypes for improvement of fruit yield through no. of branches / plant and no. of fruits / plant is appropriate in the present set of material since these characters are not much influenced by environment.

Key words: GCV, Heritability, Genetic advance, Additive genes and Capsaicin content.

Chili [*Capsicum annuum* (L.)] is an excellent source of vitamin C, ascorbic acid and capsaicin content. Variability has been exhaustively studied by several workers for various yield attributes. Fruit yield per plant

had high heritability and high genetic advance which has maximum direct effects on yield than any other plant characters. Very few workers studied the variability of ascorbic acid and capsaicin content. The present

Table 1 : Grand mean, S.E., C.D. and C.V., heritability, genetic advance mean for ten characters

Characters	Grand mean/ S.E.	PCV	GCV	Heritability in bs (%)	Genetic advance % of mean
Days to 50% flowering	51.17 + 1.73	7.95	6.78	71.7	11.90
Days to 1 st harvest	96.91 + 1.94	9.94	9.63	93.0	19.23
Plant height (cm)	47.29 + 1.67	11.00	10.11	84.5	19.15
No. of branches / plant	6.10 + 0.40	20.15	18.46	84.0	34.91
Fruit length (cm)	7.91 + 0.37	17.23	16.21	88.6	31.47
Fruit width (cm)	1.17 + 0.06	21.43	20.41	90.0	40.17
No. of fruits / plant	45.81 + 1.99	51.21	50.94	98.0	60.72
Capsaicin content	0.61 + 0.03	19.61	18.32	87.0	36.06
Vit. C (mg/100g)	150.63 + 3.85	13.63	13.27	94.0	26.60
Fruit yield / plant	194.83 + 6.20	18.89	18.48	95.0	37.25

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