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Genetic variability for yield components of Chilli

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The experiment was conducted at Central Research Farm, Gayeshpur, Bidhan Chandra Krishi Viswavidyalaya, Nadia, West Bengal lying at 22° 57'N latitude and 88°20'E longitude with an average altitude of 9.75m above MSL. It comes under Gangetic new alluvial plains of sandy loam soil with neutral to slight acidity. Field experiment was carried out over the period of two years (2007-2008 to 2008-2009) during autumn and winter season. The design was RBD with three replications. Each plot consisted of 20 plants spaced by 50x50 cm. 24 genotypes collected from different places were included & genetic variability was studied employing the 13 different characters.

In the present investigation, moderate GCV coupled with high broad sense heritability and moderately high genetic advance was registered in three characters namely fruit yield/plant, number of fruits /plants, fruit girth and seeds/fruit. So simple selection should also be rewarding in terms of improving these characters. Very low heritability accompanied with very low to moderately low genetic advance was recorded for fruit length, fruit weight, pericarp thickness and pedicel:fruit ratio indicating less responsiveness of these characters to selection. Improvement of these characters needs selection over several successive years, preferably across locations and over different plantings because such association of genetic parameters may be attributed to non-additive gene action. From the results of genetic variability, fruit yield/plant, number of fruits/plant, fruit girth and seeds/fruit emerged as most reliable characters for selection because of their probable conditioning by the additive gene action.

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