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RESEARCH ARTICLE

Studies on induced genetic variability in m_1 generation for quantitative traits in chickpea (*Cicer arietinum* L.)

■ Induri Anusha and Gaibriyal Lal

SUMMARY

Mutations were induced in three chickpea genotypes, ICC-15936, BRC-1104-127 and C-108 using sodium azide (SA) as a mutagen. The immediate effects of mutagenic treatments were measured in terms of biological damage caused in M_1 generation. All the mutagenic treatments brought reduction in seed germination, seedling length and plant survival. Such reduction, with an exception of plant survival, were found to be depended upon the dosage of the concentration.High GCV and PCV in chickpea germplasm were observed for number of effective pods per plant, number of secondary branches per plant, number of pods per plant, seed yield per plant, plant height, number of primary branches per plant, seed index, harvest index, biological yield per plant. High estimate of heritability coupled with high genetic advance as per cent of mean was recorded for number of effective pods per plant, number of secondary branches, number of pods per plant and seed yield per plant. High values for heritability indicates that it maybe due to higher contribution of genotypic components. Traits exhibiting high heritability coupled with genetic advance as percent of mean suggest that the traits are governed by additive gene action, equal contribution of additive and non-additive gene action, respectively.

Key Words : Chickpea, Genetic variability, M_1 generation, Sodium azide

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