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RESEARCH ARTICLE

Genetic variability, heritability and genetic advance in varieties of carrot (*Daucus carota* L.)

■ V.P. SANTHI, P.A. PRIYA, B. ANITA AND N. SELVARAJ

SUMMARY

Investigations were carried out on yield and quality of sixteen varieties and six hybrids of carrot under two seasons in Nilgiri conditions during the year 2012-2013. The varieties were evaluated for *per se* performance, genotypic co-efficient of variances, heritability and genetic advance. Analysis of variance revealed the existence of significant differences among the varieties studied for all the characters. Based on the *per se* performance and variance, the variety Tokita Kuroda Improved was found to be the best with respect to growth, yield and quality attributes followed by Century Super Kuroda. In varieties high estimate of genotypic co-efficient of variation was observed for root splitting percentage, total chlorophyll, root carotene, leaf carotene and root forking percentage which indicates the potential possibility on improvement of these traits by restoring simple selection programme during *Kharif* and summer. The characters *viz.*, leaf carotene, root carotene, total chlorophyll, number of leaves and root weight exhibited higher values of heritability coupled with genetic advance as per cent of mean revealed that they may possibly controlled by additive genes. Hence, direct selection may be adopted to improve the characters under consideration during *Kharif* and summer, respectively.

Key Words : Genetic variability, Carrot varieties

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