ANALYSIS OF COEFFICIENTS OF VARIATION FOR YIELD AND QUALITY CHARACTERS IN AROMATIC ADVANCED BREEDING LINES OF RICE (*ORYZA SATIVA* L.)

Sujeet Singh Kanwar and Raushan Kumar

Department of Genetics and Plant Breeding, Indira Gandhi Agriculture University, Raipur, 492006, Chhattisgarh, India Email: Sujeetgpb89@gmail.com, Raushan.ogrey@gmail.com

Abstract: The experiment was conducted at Research Farm, Department of Genetics and Plant Breeding, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.) during kharif 2010 to assess the agromorphological characterization, genetic variability, association analysis and genetic divergence among the ninety eight aromatic advanced breeding lines of rice along with popular standard checks namely Indira Sugandhit Dhan-1, Pusa Basmati-1, Badsha bhog, Dubraj, Chinnor, Mahisugandha and Kalanamak. The high estimate of phenotypic and genotypic coefficient of variation was observed from Unfilled spikelets per panicle, Filled spikelets per panicle, Total spikelets per panicle, Spikelet sterility percentage, and Grain yield per plant and Brown rice breadth.

Keywords: Aromatic rice, Genotypic Coefficient of Variance (GCV), Phenotypic Coefficient of Variance (PCV)

REFERENCES

Anonymous (2011a). World Agricultural Production. *United States Dept. of Agril. Service*. p. 7.

Anonymous (2011b). The Hindu Survey of Indian Agriculture. Agril. Statistics Division Directorate of Economics & Statistics Dept. of Agriculture and corporation, p. 125.

Anonymous (2011c). Credible Chhattisgarh, Raipur. p. 8.

Shastry, S.V., Tran, D.V., Nguyen, V.N. and Nanda, J.S. (2000). Sustainable integrated rice production. *In:* Nanda, J.S. (Ed) *Rice Breeding and Genetics:* Research Priorities and Challenges. *Oxford and IBH Pub.*, New Delhi. pp. 53-72.

Juliano, B.O. (1970). Relation of physic-chemical properties to properties characteristics of rice. Proc. 5^{th} Cental and Board Congress, 4: 21-27.

Sarawgi, A.K., Soni, D.K. and Shrivastava, M.N. (1994). Variability in correlation studies of physiochemical traits in some selected cultivars / lines of rice (*Oryza sativa* L.). *Ad. Plant Sci.*, 7(2): 298-307.

Ganesan, K., Wilfred Manuel, W. and Sundaram, T. (1995). Correlation and path coefficient analysis of yield components in F2 and F3 generations of tall X dwarf rice crosses. *Oryza*, 35(4): 329-332. **Borbora, T.K. and Hazarika, G.N.** (1998). Study of genetic variability, heritability and genetic advance for panicle character in rice. *Oryza*, 35(1): 19-20.

Kaw, R.N., Aquino, R.C., Mom, H.P., Yae, J.D. and Haq, N. (1999). Variability and interrelations in rice under cold stress environment. *Oryza*, 36(1): 1-4.

Chaudhary, M. and Motiramani, N.K. (2003). Variability and association among yield attributes and grain quality in traditional aromatic rice accessions. *Crop Imp.*, 30(1): 84-90.

Sinha, S.K., Tripathi, A.K. and Bisen, U.K. (2004). Study of genetic variability and correlation coefficient analysis in midland landraces of rice. *Ann. Agric. Res.*, 25(1): 1-3.

Kavitha, S. and Reddi, N.S.R. (2002). Variability and heritability and genetic advance of some important traits in rice (*Oryza sativa* L.). *Andhra Agric J.*, 49(3-4): 222-224.

Burton, G.W. and Devane, E.H. (1953). Estimating heritability in tall fescue *(Festucu arundinacacea)* from replicated coloal material. *Agron. J.*, 45: 478-481.

Sarkar, K.K., Bhutia, K.S., Senapati, B.K. and Roy, S.K. (2007). Genetic variability and character association of quality traits in rice (*Oryza sativa* L.). *Oryza*, 44(1): 64-67.