# Studies on Gene Action and Combining Ability for Morpho-Physiological Traits in Rice (*Oryza Sativa* L.) Under Water Stress Condition

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**ABSTRACT**

Combining ability analysis was carried out involving 24 crosses for grain yield and, its components and some of the physiological characters in *line x tester* design under water stress condition. The magnitudes of specific combining ability variances were higher than the general combining ability variances for all the characters except for days to 50% flowering, grain yield per plant and chlorophyll stability index which indicated predominance of non additive gene action in the inheritance of these traits. Three crosses *viz.,* JGL 3855/Rajendra, MTU 1001/JGL 17004 and BPT 5204/Annada could be isolated as they possessed desirable SCA, heterosis and *per se* performance for yield and physiological traits.

**Key words :** GCA, Gene action, Rice, SCA.