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# PERFORMANCE OF RECOMBINANT INBRED LINES OF BPT5204 X HP14 RICE CROSSES FOR YIELD AND DROUGHT RELATED TRAITS UNDER AEROBIC DROUGHT CONDITION

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***ABSTRACT***

***Rice is the premier food staple of the world especially in the rainfed areas of Asia, where drought is a major production constraint. 281 recombinant inbred lines (RILs) along with two parents and four checks (MAS 946-1, Rasi) were evaluated under aerobic, rainfed and drought conditions to identify superior genotypes. Field evaluation revealed significant difference among the means of different genotypes for all the traits except for test weight under aerobic condition and percentage sterility under low moisture condition during Kharif 2012. The results clearly showed genotype under aerobic condition generally yielded higher estimates of variance for genetic effects than those under moisture stress. However, grain yield traits such as days to flowering, days to physiological maturity, 1000 grain weight and drought traits viz., per cent spikelet fertility, SPAD chlorophyll meter reading had higher estimates of variance under moisture stress condition. This pointed to the fact that correlation studies of relative contributions of various grain yield and drought traits is necessary for effective selection of genotype under both aerobic and moisture stress condition. The RIL No.96, 117, 235, 398, 616, 861, 971, 1201, 2386 and 81 were found to be superior to their parents in terms of their ability to produce higher total tillers, productive tillers, 1000 grain weight and grain yield.***

***KEYWORDS:** Correlation Studies, Estimates of Variance for Genetic Effects, Aerobic Condition*

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