

Character association with yield and some important physiological-morphological traits under normal and drought stress condition

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ABSTRACT : Tolerance to drought is a complex quantitative trait and to address this, understanding of morphological, physiological and molecular basis of tolerance mechanism is vital. The present investigation was aimed at understanding the morphological and physiological of water deficit stress tolerance in eighteen genotypes including one check *ShabhaziDhan*. The present investigation was conducted with 18 rice genotypes in Randomized Block Design (RBD) with 3 replications each under water-deficit stress condition (Rainout shelter) and non stress (Normal) condition was conducted during *khari* 2013-15 with the objective to study the effect of drought stress on yield and yield attributes performance of rice genotypes. The traits viz., canopy temperature, relative water content, 1000 grain weight, harvest index, spikelet fertility, root length, number of tillers per plant, dry root weight and number of grains per panicle were found predominant with high direct and indirect effect might be useful during the selection of traits for rice improvement.

Key Words : Rice, Drought, Rainfed lowland, grain yield, relative water content.