

Genetic variability for grain micronutrient (Fe and Zn) content, plant morphological and other productivity related traits in *rabi* sorghum (*Sorghum bicolor* (L.) Moench)

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ABSTRACT : Sorghum [*Sorghum bicolor* (L.) Moench] is an important food crop particularly in arid and semi-arid tropics. It is a dual-purpose crop providing staple food for human consumption (35%) and rest of as a fodder for livestock, alcohol production, as well as preparation of industrial products (Awika and Rooney, 2004). Many millions of people in Africa and Asia depend on sorghum as the stuff of life. The poor and vulnerable group of these regions depends upon sorghum for their calories and micronutrients. In the absence of access and affordability, biofortification of sorghum with micro nutrients will helps in increasing the nutritional security of the poor rural peoples. Hence, the present investigation was undertaken to determine the magnitude of genetic variability for grain iron and zinc content, morphological and grain yield traits in diverse group of breeding materials. A wide range of variability existed for all the traits studied indicating the presence of significant variation among the genotypes. High PCV and GCV estimates revealed the extent of variability and high heritability coupled with high genetic advance recorded for all the traits indicated that these traits respond to selection. The genetic variability found among the 134 sorghum genotypes for yield and nutritional traits can be exploited in developing micronutrient dense genotypes for elevating hidden hunger in future days to come.

Key Words : Sorghum (*Sorghum bicolor* L.), genetic coefficient of variation (GCV%), phenotypic coefficient of variation (PCV%), biofortification, hidden hunger, nutritional security, heritability, genetic advance.