

International Crops Research Institute for the Semi-Arid Tropics



Sorahum

Germplasm Collections

Taxonomy

Core Collections

Mini Core Collections

Reference Set

Random Core Selection

Sorghum Mini Core

Global Sorghum [Sorghum bicolor (L.) Moench] germplasm collections at ICRISAT genebank exceeds 37,000. A core collection (2247 accessions) was developed in 2001 to enable researchers to have access to smaller set of germplasm. However, the core collection was found to be large. To over come this, a sorghum mini core (10% accessions of core or 1% of entire collection) was developed from the existing core collection. The core collection was evaluated for 11 qualitative and 10 quantitative traits in an augmented design using three control cultivars in 2004-2005 postrainy season. The hierarchical cluster analysis of data using phenotypic distances resulted in 21 clusters. From each cluster, about 10% or minimum of one accession was selected to form a mini core that comprised 242 accessions. Click here for List of accessions The data in mini core and core collections were compared using statistical parameters such as homogeneity of distribution for geographical origin, biological races, qualitative traits, means, variances, phenotypic diversity indices and phenotypic correlations. Mean difference percentage, variance difference percentage, coincidence rate, and variable rate were also calculated. These tests indicated that the mini core collection represented the core collection. The present mini core collection can be evaluated extensively for various economic traits and resistance/tolerance to stresses to identify parents for utilization in the crop improvement research and for the genomics studies.

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