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**Phenotypic Evaluation of a Finger Millet**  
**[*Eleusine coracana* (L.) Gaertn.]**  
**Core Collection under different Field**  
**Conditions in India**

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## Abstract

Finger millet [*Eleusine coracana* (L.) Gaertn.] is a crop common in Africa and South Asia, which is high adaptable to diverse soils and weather conditions. Finger millet has a high nutritional value due to its iron, calcium and protein content. Because of the underutilization of this crop the BMZ funded a project to enhance productivity of finger millet and subsequently income and nutrition in Africa and Asia.

The genebank at ICRISAT, Patancheru, India, holds 5940 accessions of finger millet germplasm. From this collection, a core collection was developed containing 622 accessions.

This core collection was characterized for five qualitative and 15 quantitative traits in two locations. A reduced core collection was developed based on the races of finger millet and a cluster analysis of the quantitative traits. This reduced sample consists of 91 accessions and was compared with the core collection for its means, variances, frequency distributions and the Shannon ( $H'$ ) and Evenness (E) index. These analyses showed that the reduced core collection adequately represents the genetic diversity of the finger millet core collection. The developed reduced core collection can be used for enhance utilization of finger millet for future breeding programs in Africa and Asia.