

THE BRAZILIAN CORE COLLECTION OF MAIZE

T. ABADIE¹(tabadie@inia.org.uy); C.M.T.²; R.V. de ANDRADE³;

J.R. MAGALHAES²; S.N. PARENTONI³

¹Facultad de Agronomía-Uruguay; ²Embrapa Recursos Genéticos e Biotecnologia;

³Embrapa Milho e Sorgo

The Brazilian Maize Germplasm Collection consists of approximately 3800 accessions conserved at Germplasm Banks in Brazil and CIMMYT. Of these, 2280 are currently conserved in Brazil, 1753 originary from populations collected at farmers' fields, 222 populations with some level of breeding, and 288 introductions from other countries. With the objective of allowing better access to this collection, while minimizing the cost of genetic conservation and evaluation of germplasm, a Core Collection of 300 accessions was obtained. A two level stratified sampling strategy was used. At the first level, the accessions were classified into four strata according to their origin: a) landraces, b) landrace derived composites, c) improved materials, and d) introductions. Stratum b) (landrace derived composites), was not represented in the core. Each of the other three strata were represented in the Core Collection following approximately the proportional approach. Within stratum a), accessions were classified based on geographical origin and grain type, and the selection of the accessions for the Core subset was done by the curator trying to represent the geographical diversity within each region. For stratum c), the accessions were classified based on the breeding program of origin. For both strata c) and d), the selection of the accessions for the Core subset was done with the assistance of the breeders, trying to represent meaningful genetic diversity. This research was developed by a multidisciplinary group of curators, breeders and biometricians.

Key words: Core Collection, Maize