EVALUATION OF ROMANIAN MAIZE LOCAL LANDRACES FOR INCREASING THE EFFICIENCY OF THEIR USE IN BREEDING PROGRAMS

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Abstract
At present there can be noticed a main interest of plant genetic resources users for accessing information related to characterization and evaluation descriptors. Maize genetic resources represented by local populations originating from different areas, represent important useful genes sources for improving species. Their e is possible due to studies and comprehensive measures which can lead to the maintenance of biodiversity and increase its efficiency. The paper presents the results of characterization and evaluation of a total of 61 local landraces with cold test index >80%, selected from a total of 300 studied local landraces. These local landraces can be useful genes sources for maize breeding at low temperature, being a main trait for maize cultivation in wetter and colder areas in Romania. The study shows a high diversity for most of the morphological characterization descriptors of the plant, ear and kernel, physiological evaluation at low temperature resistance of the plantlets, precocity and biochemical evaluation for kernels quality.
In order to obtain information, at intervariety level, for maize local landraces studied, molecular characterization was performed by RAPD method (random amplified polymorphic DNA). Many maize local populations with values of characterization and evaluation descriptors of real interest were emphasized. Utilization of these local landraces as starting material can lead to the identification of useful genes sources for improvement of important agronomic characters of maize (yield capacity, precocity, resistance to low temperatures, quality and genetic integrity).

Key words: maize local landraces, cold test index, protein content, RAPD method

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