

CHARACTERIZATION OF THE NATIONAL LOCAL MAIZE LANDRACES

**Danela MURARIU¹, Domnica Daniela PLĂCINTĂ¹, Dănuț Petru SIMIONUC², Diana BATÎR RUSU¹,
Dan Mihai GIURCĂ¹, Tiberiu SÂRBU²**

e-mail: danela.murariu@svgenebank.ro

Abstract

Maize is one of the most important crops in Romania. In the mountainous and sub-mountainous areas there has been a great variety of local landraces, which have been replaced over time by maize hybrids. The local maize landraces preserved in the Suceava Genebank are the result of collecting from all country areas, both through the care of RICTP Fundulea and the Agricultural Research Stations: Suceava, Turda, Șimnic, Lovrin, Albota, Podu Iloaiei and Geoagiu (1957-1975), as well as of the collecting laboratory within Suceava Genebank (1990-2021). The paper presents the results of the characterization of 1358 local maize landraces obtained within 30 years. Morpho-physiological observations, biochemical and genetic analyzes were performed, both at Suceava Genebank and at the other research institutions. The characterization of local landraces has led to the identification of gene sources useful for maize breeding of the important characteristics (yield capacity, precocity and quality, resistance to low temperatures and to Fusarium infection). A significant number of populations have shown good agronomic stability, and can be considered potential sources of genes for improving the tolerance of maize to biotic and abiotic stress factors and the quality of new created hybrids, which in addition to high yield capacity to have a high protein content, to be resistant to low temperatures and to Fusarium infection.

Key words: maize locale landraces, morpho - physiological characterization, secondary evaluation, molecular biology