

Abstract

The purpose of that study was to identify the differences existent among the main characteristics of marigolds seeds (the length, the width, the thickness, MMB) that appertained to 12 local populations from four districts of the western country (Arad, Caras-Severin, Hunedoara, Timis). After the investigations realized on seed-tree material collected from Zaradeni, Alunis, Covasint, Berzovia, Ghertenis, Ocna de Fier, Geoagiu, Ostrov, Rachitova, Fibis, Birda and Alios it could observe that existed differences among all the morphological characteristics of those. Local populations with the biggest value of seeds length were Birda (19.33 mm) and Fibis (17.44 mm) from Timis district, also Alunis (17.62 mm) and Covasint (17.98 mm) from Arad district. About the seeds length of *Calendula* the local populations of Geoagiu (13.16 mm) and Ostrov (13.89 mm) were registered with superior differences, statistically assured face to the local populations of Rachitova (13.34 mm) and Zadareni (15.36 mm). Concerning the seeds thickness, that had limits between 1.75 mm (local population of Fibis-Timis district) and 2.85 mm (local population of Ostrov-Hunedoara district). After MMB making it observed that oscillated between 8.33 g in case of local population Birda (Timis district) and 16.66 g to local population Covasint (Arad district). No one of the main seeds characteristics registered significant differences among local populations taken in study. Thanks to multiple usages of *Calendula* plants, the study of main seeds characteristics was absolutely necessary thanks to the importance that it had on the production. Accordingly, we concluded the fact that to all five characteristics of seeds taken in study had registered differences regarding the 12 local populations from the western of country.

Key words: marigolds, seeds, morphological differences, biometrical determinations, local populations