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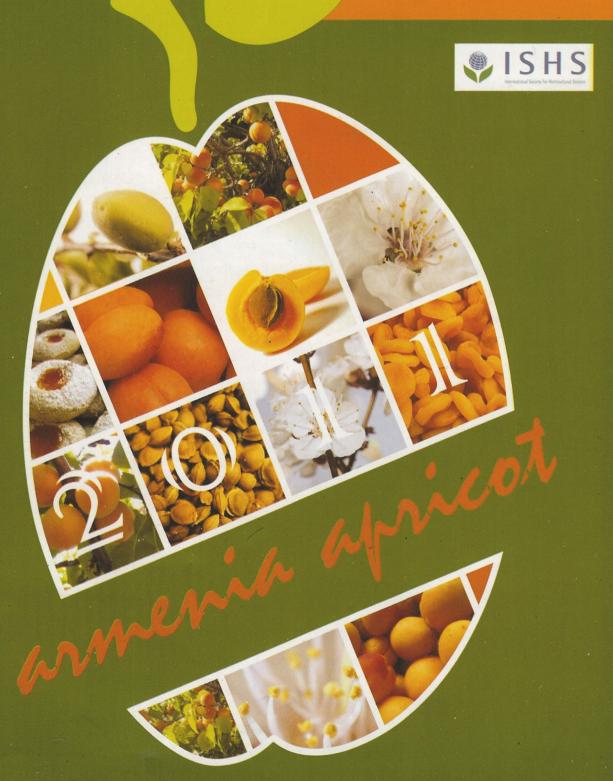
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APRICOT DIFFUSION IN THE MEDITERRANEAN BASIN: A SÉRIOUS LOSS OF GENETIC DIVERSITY

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Analysis of apricot (Prunus armeniaca L.) diffusion process in the Mediterranean Basin was conducted in order to understand the evolutionary history of this species in this region. 207 native apricot accessions representatives of the local variability in each country were selected excluding those issued from breeding programs. They are originating from different Mediterranean countries: Algeria, France, Italy, Morocco, Spain, Tunisia and Turkey. This material was analysed for genetic diversity and structure using a common set of 25 monolocus microsatellites distributed throughout the Prunus genome. The studied germplasm showed considerable polymorphism with an average of 10.28 alleles per locus. According to the geographic origin of the material, eleven groups were defined. Genetic variability analysis was assessed within each group revealing a gradient of decreasing diversity and allelic richness from the east to the south-west of the Mediterranean Basin. The model-based Bayesian approach clustering using STRUCTURE program was applied. Four main genetic clusters ('Irano-Caucasian', 'Adaptative Diversity', 'Mediterranean Basin', and 'Maghreb') were identified and highly differentiated (Fst = 0.122). Overall, results suggested that from the Irano-Caucasian area, apricot was introduced into the Mediterranean Basin through at least two different routes: the first one through the South of Europe and the second one through the North Africa This diffusion process from eastern to western part of the Mediterranean Basin has been characterized by a significant loss of genetic diversity. On the present bases relevant elements have been obtained to optimize genetic resources conservation and the establishment of a core collection, as well as to future association genetic studies.

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