

MOLECULAR CHARACTERIZATION OF ALMOND GERMPLASM FROM MARCHE REGION

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almond, genetic variability, microsatellite markers

Almond (*Prunus dulcis* Mill. D.A. Webb.) is one of the oldest domesticated nut tree species. Native to Central Asia, it has largely spread eastwards and westwards up to the Mediterranean basin, which is considered a secondary center of domestication of this species. In Italy, almond is largely cultivated in the South, especially in Sicily and Apulia regions, however small collections of cultivated trees and some scattered trees are also present in other Italian regions such as Abruzzo, Sardinia, and Marche. Marche region is in Central Italy and it is characterized by diverse climate from the dry areas of the coast to the rainy mountainous zone. The main cultivations are cereals and different fruit crops. Among these, almond is widely present in the region and some areas with wild uncultivated trees have been recently identified. In the last years, many studies aiming to characterize and evaluate the genetic diversity of almond germplasm collections sited in Southern Italy were performed, while very few studies were carried out on almond germplasm located in Marche region so far.

In the frame of a scientific collaboration between the Agency for Innovation in the Agri-food and Fisheries sectors of the Marche Region (AMAP) and the Department of Soil, Plant and Food Sciences of the University of Bari, we collected 70 almond accessions in different rural areas of Marche region and we analyzed them through 14 microsatellite markers with the purpose to study the genetic variability existing in this collection. Moreover, to identify cases of synonymy and homonymy and analyze the genetic relationships with the most widespread Italian

varieties, the obtained molecular profiles were compared with those of 30 commercial varieties. The results showed a great genetic variability of the almond collection from Marche highlighting the necessity to safeguard and promote these local genotypes, which represent an important resource for breeding purposes.