

EXPLORING OLIVE GERMPLASM OF CALABRIA

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Olive germplasm in Calabria accounts at least 28 varieties, most of them have been characterized. In a recent study conducted within the project OLEPY of the Calabrian Rural Development Program, a wide sampling of olive germplasm of the Eastern Ionian coast from Copanello to Soverato has been starting since 2013, in order to verify the genetic identity of non cultivated olive trees widely spread around this area. A molecular characterization of 121 accessions has been carried out with a highly polymorphic set of microsatellite markers and a study of genetic population structure was performed using Bayesian-based analysis. Calabrian known cultivars were included in the cluster analysis. First results indicated a genetic correspondence among a few Calabrian cultivars such as Grossa di Cassano and Mafra di Cerchiara; Tondina and Santomauro; Mafra, Dolce di Cerchiara and Spezzanese. Moreover, cluster analysis showed a very high genetic variability of the 121 accessions analyzed.

Only a few accessions (5) associated to Carolea (the main cultivar spread in this area). Population structure analysis confirmed a wide genetic variability identifying 5 sub-populations adopting an admixture model. Genetic differentiated material has been propagated and evaluated for root ability and vigour. Experimental trials to assess the graft affinity with the main Calabrian cultivars are currently in progress.