Proceedings of the LXVI SIGA Annual Congress
Bari, 5/8 September, 2023
ISBN: **978-88-944843-4-2**

Poster Communication Abstract – 6.33

BIODIVERSITY ASSESSMENT AND CONSERVATION STATUS OF OLEASTER (OLEA EUROPAEA L. SUBSP. EUROPAEA VAR. SYLVESTRIS) IN THE MEDITERRANEAN BASIN

FANELLI V.*, MASCIO I.*, FALEK W.**, MIAZZI M. M.*, MONTEMURRO C.*

*) Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, 70126 Bari, Italy
**) Ecole Nationale Superieure de Biotechnologie, Constantine 251000, Algeria

oleaster, biodiversity, conservation, genetic evaluation, Mediterranean Basin

Olive (*Olea europaea* L.) is one of the most iconic trees of the Mediterranean Basin, with important implications from a social, economic, and ecological point of view. Six subspecies are currently recognized in the olive species based on morphological traits and geographical distribution. The subsp. *europaea* is the only one divided into two botanical varieties: cultivated olive (var. *europaea*) and wild olive or oleaster (var. *sylvestris*). Oleaster is considered the ancestor of cultivated olive and they both show a uniform distribution across the whole Mediterranean Basin.

Climate change and new emerging diseases are expected to severely affect the cultivation of olive leading to serious economic and ecological consequences in the future. Oleaster presents a higher genetic variability compared to the cultivated olive and some wild trees were found adapted to particularly harsh conditions; therefore, the availability of wild olive germplasm resources suitable for breeding programs and the preservation of this great source of genetic diversity is crucially important. Despite the great potential, only recently the need to deeply characterize and adequately preserve the wild olive resources drew the attention of researchers.

In our work, we gave an outline of the most important morphological and genetic studies performed on oleaster trees collected in different

countries of the Mediterranean Basin summarizing their principal findings. Moreover, we performed a meta-analysis with the purpose of comparing the genetic differentiation found in different oleaster populations and their country of origin. Finally, we analyzed the strategies introduced so far to preserve and manage the oleaster germplasm collections, giving a future perspective on how the wild olive genetic resources would be important to face the future agricultural challenges posed by the evolving climatic conditions and emerging diseases.