



Exploration and Selection of the Wild Olive Genotypes[#]

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Accepted June 06, 2012

Abstract: Exploration on wild olive diversity carried out during the period 2000-2011, recorded a number of 27 wild forms. Morphological marker based analysis were performed for olive identity characterization, to determine their localization, usage limits as well as to build in-situ & ex-situ collection of 27 wild olive forms. Morphological description (Rezgen) was done for each olive genotype, in total of 49 characters; of tree, leaf, inflorescence, fruit and endocarp were measured during the study. Information was gathered for 27 forms with local designations, which represent 7 populations. Basing on the endocarp characteristics, as an important morphological marker, wild olive forms have been modelled and analysed (PCA), are clustered in two groups. (i) *Olea europaea* L. subsp. *oleaster* (Hoffm. & Link) 6 Varieties, (ii) *Olea europaea* L. subsp. *sylvestris* (Mill.) 1 Variety. According to the oil content, genotypes are clustered in two main groups in: (i) low oil content (>14%), (ii) medium oil content (15% -18%). Some of fruit and endocarp features (D, d, D/d, P/E, weight) were highly related to the oil content ($R^2=0.887$). The identified material is of great importance when considering genetic – selective work, as well as sapling production. According to the individual possessive characteristics we might classify: (i) Two individuals that possess long internodes with high germination power. (ii) Three individuals with healthy embryos after root taking. (4-D, 8-Kr, 2-KT). The Diversity Coefficient (KD) is classified in three regions. (i) South 2.61 (ii) Central 1.34, and, (iii) nord region 0.223.

Keyword: *Olea europaea*, diversity; genotype; endocarp; regions; *oleaster*; *sylvestris*

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[#]This paper has been presented at ICE-2012 Tirana, Albania