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Poster Abstract - E.08

ANALYSES OF MORPHOLOGICAL STERILITY AND SELF-INCOMPATIBILITY IN OLIVE BY SSR MARKERS

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Olive (*Olea europaea* L.) is one of the most important species in the Mediterranean basin. Despite its importance, olive has a lack of genetic knowledge and breeding programmes. Nevertheless, up to present time, there is a serious need for developing competitive production systems.

We conducted a study about the self-compatibility and the variability of some flowering characteristics among four elite olive cultivars (Coratina, Leccino, Ogliarola barese and Bella di Spagna) useful to start up genetic mapping project.

The experiment was carried out for two years in two different environments with a combination of morphological traits analyses and molecular tools to study different aspects of blooming system in olive.

The aim of this research was to evaluate the variability for abortion of pistil, number of flowers per inflorescence, morphological sterility and self-fertility among the examinated cultivars.

All the cultivars showed a varying degree of self-fertility and morphological sterility. In both environments the cv. Bella di Spagna pointed out the highest incidence of abortion of pistil. All the observed cultivars showed always a partial self-compatibility, but each cultivar was characterized by a different influence of pollination condition. Subsequently to the evaluation of self-compatibility, we used SSR markers to distinguish F_1 seedlings derived from cross-pollination and self-pollination. The results of molecular analyses showed that cultivars considered as self-incompatibility are able to produce olives originated by self-pollination. We recognized 85% of seedlings originated by cross-pollination and 15% derived by self- pollination of Coratina in the F_1 derived from the cross between Coratina x Picholine.