



“Building a New Research Alliance to Reclaim Faba bean Production Area Abandoned to Orobanche”

Workshop and Mini-Symposium Scientific Programme



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W1.3 “The status of *Orobanche crenata* in Sicily and preliminary observations on *Orobanche crenata* susceptibility in *Vicia faba*.”

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ABSTRACT: Traditionally *Vicia faba* cultivation in Sicily (S Italy) plays a key-role in crop rotation and has a reasonable economic return being used for human and livestock feeding. Broomrape is one of the worst adversity of this crop, destroying entire harvests and forcing farmers to abandon large areas. Since more than 10 years we are recording *Orobanche crenata* populations variations and testing traditional remedies to assess their applicability in a low impact agriculture that may be applied also in developing countries. Starting from the observation that often in C Sicily dense fields of Broadbean show lower Broomrape infestation, we did some preliminary observations on *Orobanche crenata* susceptibility in *Vicia faba* var. *faba* and *Vicia faba* var. *equina* with different agricultural techniques. First results show a higher resistance of the latter sowed at higher densities.

The department of Agricultural and Forest Sciences of the University of Palermo, since 1963, leads, among the others, the farm Sparacia (about 28 Ha in C Sicily), where we are carrying susceptibility observations on *Vicia faba* var. *faba* and var. *equina* to *Orobanche crenata* at different sowing densities. Further observations are planned on *Vicia faba* var. *minor*. Once carried out the initial screening stage on the different local varieties in order to identify the most resistant to the parasite, experimental crossings are planned, also using the most modern genetic techniques, in order to obtain cultivars adapted to the climate of Sicily with satisfactory productivity and resistance to local races of the parasite reducing the use of chemical herbicides.

BIOGRAPHY: Dr. Gianniantonio Domina teaches plant morphology and plant taxonomy at the University of Palermo. He is General Secretary of OPTIMA (Organization for the Phyto-Taxonomic Investigation of the Mediterranean Area) and Secretary of the Group for Floristic investigation of the Italian Botanical Society. His main interest concerning parasitic plants is on Taxonomy, Nomenclature, Distribution and Biological Control of *Orobanche* in the Mediterranean Area. In this context he is author of the taxonomic treatment of the genus *Orobanche* for the Euro+Med Project (<http://www.emplantbase.org>) and, since 2003, author of 19 full articles on international scientific journals.