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Poster Abstract - H.15

GENE-ESCAPE STUDIES ON TOMATO GROWN IN OPEN FIELD AND GREENHOUSE

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Agriculture has always drawn great usefulness from genetic improvement. Most of the species improved as a result of such activity are crossable not only each other, but also with their wild ancestors or genetically close weeds. Therefore it can be asserted that the "gene flow" has been a phenomenon started together with species evolution.

The hybridization and the introgression of characters between wild species or weeds and cultivated ones are therefore always happened, with different extent according to the species considered. With the exponential widening of the GM crops grown worldwide, the problem of the "gene flow" has assumed greater interest. The chance that a transgene flow toward wild or similar species could occur has always been one of the major concern about the presumed "ecological risk" of GM crops.

The entity of the gene flow, the possible environmental consequences, and the strategies taken into account to limit such phenomenon, are deeply described in the scientific literature of last the 10 years. Single species are considered, case for case, particularly grains, canola and sugar beet. Less literature is available on tomato, and no indications are available regarding the influence of the different cultivation methods (open field or greenhouse).

The experiences carried out has concurred to verify the natural gene transfer between the various cultivar and Italian ecotypes of tomato grown, both in field and greenhouse. The analysis of the offspring obtained from the plants tested, and the search of spontaneous crossings, has been carried out by means of phenotypic and molecular markers.