Evaluation of pollen flow in relation to a quick monitoring index (QMI)

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This work is part of LIFE08 NAT/IT/342 DEMETRA project with the aim of developing a Quick Monitoring Index (QMI) to rapidly assess the potential risk generated by a selected range of transgenic crops in well determined ecosystems or biotopes. Therefore, it is important to define pollen dispersal of some species (crops and trees) which could potentially be converted in transgenic in the near future, and cropped (or potentially cropped) in proximity of protected ecosystems. The species included in the project are maize, sunflower, canola and poplar cultivated in selected areas in the Migliarino – San Rossore – Massaciuccoli Regional Park (Tuscany, Italy). Some pollen traps were installed taking into account the distance from cropped area and the dominant wind during the period of pollen dispersal. The information achieved is needed in order to collect data concerning the possible distance covered by transgenic pollen that potentially could impact biodiversity and target species. This will be also necessary to individuate potential periods and conditions that increase the risk of pollen dispersal.

Keywords: pollen flow, maize, oilseed rape, poplar