can be considered as a small agro-ecosystem within the Mediterranean ecosystem. Mediterranean-type ecosystems are vulnerable to desertification; when an ecosystem community has high biodiversity the risk of disease decreases, this pattern, is called the *dilution effect*. The biodiversity and the composition of species in a community is the true indicator of higher and lower rates of disease. In spite of this, the agro-ecosystem species are able to survive, but their handling and management is becoming more and more difficult because of an increasing spreading of pests. Recently, the spreading of downy mildew on basil caused by *Peronospora belbahrii* has became economically relevant in the Liguria Region. The economic evaluation and environmental impact assessment in the Mediterranean ecosystem with basil crop system and disservices caused by this pathogen, are still complex. The main target of this study is the characterization of the different indicators associated to *P. belbahrii* based on interactions observed between the ecosystem and the basil agro-ecosystem.

ECOSYSTEM BASED APPROACH APPLIED TO DISEASE MANAGEMENT IN AGRO-ECOSYTEM

S. Sozzo,[1,2] G. Gilardi,[1,2] A. Garibaldi,[2] M.L. Gullino[1,2]

[1]*Department of Agricultural, Forest and Food Sciences, University of Turin, Grugliasco (TO);* [2]*AGROINNOVA Centre, University of Turin, Grugliasco (TO), Italy*

E-mail: ssozzo@unito.it

Basil (*Ocimum basilicum L.*) is an economically important crop grown in northern Italy, as well as in other Mediterranean regions. *Genovese Gigante* is the only cultivar used for industrial production of *Denominazione di Origine Protetta* (*DOP*) *pesto*. Basil cultivation on the Riviera Ligure