

INTERVEG - ENHANCING MULTIFUNCTIONAL BENEFITS OF COVER CROPS VEGETABLES INTERCROPPING

InterVeg project is a part of the CORE Organic Programme II. The partners are:

- Consiglio per la Ricerca e sperimentazione in Agricoltura, Centro per lo studio delle relazioni tra pianta e suolo, **Italy**
- Consiglio per la Ricerca e sperimentazione in Agricoltura, Unità di ricerca per l'orticoltura, **Italy**
- Associazione Italiana Agricoltura Biologica, **Italy**
- *Alma Mater Studiorum* - Università di Bologna, Department of Agricultural Sciences - Entomology, **Italy**
- University of Kassel, Department of Organic Vegetable Production, **Germany**
- Aarhus University, Department of Food Science, **Denmark**
- University of Maribor, Faculty of Agriculture and Life Science, **Slovenia**

Cover crops in organically managed agro-ecosystems represent an important tool to manage at once soil fertility, arthropod pests, disease and weeds. Cover crops are usually not so common in specialized vegetable systems but they can be introduced as living mulch, intercropped with cash crops. If this management option is chosen it is important to reduce the competition between the main and cover crop and to use a crop management strategy able to optimize the ecological services within the field and the farm as a whole.

The project aims and approach follow the eco-functional intensification principle as mentioned in the "Strategic Research Agenda for organic food and farming" developed by the Technological Platform "Organics".

The InterVeg partners have settled parallel experimental field in 4 EU countries (Italy, Denmark, Slovenia and Germany) to evaluate the effect of introducing living mulches in organic vegetable production systems. Cover crop sowing period, root pruning as well as spacing or yielding crop and cover crop density are the relevant factors that are under investigation in order to optimize the performance of the living mulched agro-ecosystems in comparison with the sole crop systems. The selected yielding crops have been identified as cau-

liflower for the 4 countries, artichoke for Italy and leek for the other countries. A total of 8 field experiments have been carried out in the first year of the project and a detailed list of common measurement has been collected in each location. The data collected include yield and marketable yield, number of plants, N/P/K content, soil, water, competition indices for weeds, cover and cash crops. In addition data on pest and beneficial, energy consumption and costs have been also collected. Since also commercial organic farms are involved in the project as pilot farms, the results are allowing to consider the effect of living mulch at larger scale, such as impact on pest and beneficial insects but also to encourage farmers involvement and to support dissemination activities. The first field visits have been held in Italy and Denmark showing to local farmers both experimental and pilot farm field of cauliflower with living mulch. This direct involvement of local stakeholders will start this summer in the other countries with both pilot farm and field days.

Project Coordinator:

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