

ECOLOGICAL INFRASTRUCTURE MANAGEMENT FOR ENHANCED POLLINATION AND TARGETED PRECISION BIOCONTROL: THE BICO POLL PROJECT



BICO POLL project is an EU-ERANET activity of the CORE Organic Programme II. The partners are:

- University of Helsinki, **Finland** (coordinator)
- Agen.Ter. - Territorial Agency for Agro-Environmental Alimentary and Energetic Sustainability, **Italy**
- Agricultural Research Station, **Åland Islands**
- Danish Environmental Protection Agency, **Denmark**
- Erzincan Agricultural Research Institute, Ardahan University, **Turkey**
- Estonian University of Life Sciences, Tartu, **Estonia**
- Lower Saxony State Inst. for Consumer Protection and Food Safety, Celle, **Germany**
- National Institute of Biology, Ljubljana, **Slovenia**
- Norwegian University of Life Sciences, Ås, **Norway**
- Swedish University of Agricultural Sciences, Alnarp, **Sweden**
- University of Ghent, **Belgium**

The project focuses on two main topics:

- 1 - the use of pollinators to carry to the target crop flowers beneficial microorganisms that act as antagonists of plant pathogens that penetrate through the flowers;
- 2 - the improvement of the pollination of organic horticultural and fruit crops.

The Italian working group, Agen.Ter., is the leader partner of the Work Package on the study of Landscape Management initiatives to support pollination and Beneficial Control Agents (BCA) dissemination. The main objectives are to determine the impact of presence/absence of key ecological infrastructures (pollen and nectar food, nesting sites) on the colonisation efficacy of managed solitary bees in the target crop system, as well as their impact on the abundance of wild pollinators; establish the role of vegetation management using 'push-pull' strategy on enhancing managed and wild

pollinator activity in strawberry fields; assess the benefits to fruit pollination of managing solitary bee populations.

In 2012 two studies were carried out: the first study focused on the efficacy of the efficient pear pollinator *Osmia cornuta* (Hymenoptera Megachilidae) in carrying *Bacillus amyloliquefaciens*, a preliminary step necessary to develop a pollinator-mediated biocontrol programme against *Erwinia amylovora* on pear; the second study focused on the efficacy of *Apis mellifera* to protect organic strawberry cultivation from its most important disease, the grey mould, *Botrytis cinerea*, dispersing its antagonist *Gliocladium catenulatum*.

*Bettina Maccagnani**, Roberto Ferrari, Marco Pozzati
Agen.Ter. - Territorial Agency for Agro-Environmental Alimentary and Energetic Sustainability, via Argini Nord 3351, 40014 Crevalcore, Italy. (*bmaccagnani@caa.it)