



Egg parasitoids for protecting olive trees

The Triphelio consortium has introduced biotechnologies for protecting olive trees from parasites. Methods selected to disturb the reproduction process included diffusion of the sexual hormones of female moths and biosafe releases of mass reared egg parasitoids

OBJECTIVE

Triphelio's objective was to assess the efficacy of alternative natural methods as substitutes for pesticides.

Symbol of the Mediterranean, the olive tree is particularly prone to attacks from insects such as *Prays oleae*, more commonly known as the 'olive moth'. This disease affects the quality of harvested olive oil and gives it a rancid taste. In spring, the presence of these insects leads to the loss of blossoms and in summer the larvae attack the fruit.

Bio-safe technologies versus insecticides

In a fragile environment, the objective set for the Triphelio project, which is financed by the European Union, is to develop a long-term strategy for managing the presence of olive pests. Inundative releases of mass reared egg parasitoids of Trichogrammatidae, a natural enemy tiny wasp, and sexual pheromones are used to disturb insects' reproductive cycle. Integration of these control methods leads to a strong and natural reduction of infestation.

Close links with farmers

The work carried out by Triphelio's network of scientific experts has attracted strong interest from Mediterranean olive farmers. Their active participation in the project has strengthened their confidence in science and contributed to the research project. Some farmers have been trained in this procedure (in Egypt, for example).

The project has also created closer links between the private sector and applied research. Finally, the organization of debates and training programmes has led to improved personal skills and technical equipment, and has encouraged North-South transfers of technology.

Positive outcomes

The approach taken by Triphelio to encourage quality olive production will in the future lead to lower risks of water pollution and of pests' ability to resist pesticides. It will also give greater protection to ecosystems and enrich the biodiversity of olive orchards, with subsequent improvements in reducing soil erosion, soil depletion, and runoff.

From the human perspective, these

procedures will also offer concrete benefits to farmers. Their quality of life will be directly affected by improvements in the quality and sales of olive products.



Farmers mounting cards of egg parasitoids.



Meeting of project members.

THE PARTNERS IN THE PROJECT Sustainable control of lepidopterous pests in olive groves: integration of egg parasitoids and pheromones (Triphelio) - 2001/2005: Institute for Biological Control (Germany); Alexandria University, private sector (Egypt); Olive Tree Institute (Tunisia); Chemical Ecology and Natural Products Laboratory (Greece); Universidade de Trás-os-Montes e Alto Douro, Polytechnic Institute of Bragança (Portugal)