A new generation of bioinsecticide against *Ceratitis* capitata

A research spanish group has isolated and identified a stump of the genus Bacillus, extremely toxic for larvae of Mediterranean fruit fly

by Ernesto Vania

The Mediterranean fruit fly has a special economic relevance in the Mediterranean countries.

Given the capacity of the C. capitata to tolerate colder climates than the rest of the species of flies and their wide range of host plants, the C. capitata has been considered as one of the most important species from an economic point of view.

This plague attacks more than 260 species of fruits, flowers or nuts of agricultural fruits and it has been estimated that it causes losses assessed in hundreds of millions of dollars annually in the countries where it becomes established.

The research group of the Institute of Biotechnology of the University of Granada (Spain) has isolated and identified a stump of the genus Bacillus, extremely toxic for larvae of C. capitata.

Chemical insecticides such as malatión have been traditionally used, but they are not effective for the control of the C. capitata. In addition, their use presents a series of drawbacks such as environmental pollution, dangerousness for the staff, the need of safety periods before the commercialization of the fruit, insects-resistance phenomena, etc.

As the European legislation is getting increasingly strict with regard to the use of chemical insecticides -- the use of malatión has been forbidden since June of 2007 -- the alternative of biological control is gaining prominence.

The results obtained by the scientists from Granada are promising, as at present there is not any bio-insecticide in the market based on bacteria and active against this plague. In addition, this is a new technique for the Mediterranean fruit fly, environmentally friendly, non-toxic, easy to produce, and one that can be supplied by conventional methods.

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