

Fruit flies controlled in orange crops without pesticide use

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Orange crop infestation by the Mexican fruit fly and the cancelation of exportations of frozen pulp motivated Cítricos Ex (Citrex) research to create an effective technique to control the plague without using pesticides, as well as to the development of a mathematical model to predict the moment when the fruit is more susceptible to an attack.

Two years of research, added to the assessment by the National Institute of Forest, Agricultural and Forest Research (INIFAP) and the Ecology Institute (INECOL), "has allowed us to design a control strategy that prevents the presence of the insect in the [fruit](#)", says Sofia Antonio Nemiga, researcher at Citrex and head of the project.

The technique involves placing fly traps in the crop area. Sixty traps are distributed per hectare, instead of the usual one per five hectares. "We use attractive substances of high effectiveness that are poured in 500 ml pet bottles, which have previously been drilled with small holes," Citrex researcher Fortino Herrera Méndez says.

He points out that field studies suggested the distribution needed for the traps throughout the crop, given that there are zones where the fly is more prone to attack. This technique processes the fruit without plagues or pesticides, allowing Citrex to reestablish exportations and pay a higher price to the citrus producers.



The researchers indicate that the [mathematical model](#) is still in an experimental phase; however, in about five agricultural cycles, it could be completed, and determine when the fruit is more susceptible to infection.

The development of this project has included the establishment of a climate station network that monitors crop-attacking insects and the training of producers, researchers and students.



"The information about the control method is already available, so that citrus producers can approach us at any time for assessment and help in the implementation of the technique, which is also very accessible. Our goal is to keep developing alternatives to control fly populations, which can be adapted and applied without presenting a strong investment", Herrera Méndez says.

Provided by Investigación y Desarrollo

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