Chile searches for new tools to combat the "Lobesia botrana"

On Friday November 4, the Association of Fruit Exporters of Chile AG (ASOEX) and the Foundation for Fruit Development (FDF), together with the Agriculture and Livestock Service (SAG), officially released the Trichogramma pretiosum insect, a tiny insect, present in Chile, that is a natural enemy of Lobesia botrana, in a sector of Quilicura to parasitize its eggs and control the pest in urban areas of the country, especially in houses with grapevines.

The release of this insect is part of an experimental pilot plan to control the Lobesia botrana at the urban level. It is funded by ASOEX, executed by the FDF, and it is one of the actions envisaged in the National Program against the Lobesia botrana (PNLB) for the 2016-2017 season, which is led by the SAG. The national director of the SAG, Angel Sartori; the president of ASOEX, Ronald Bown, and the president of the FDF, Francisco Letelier, attended the release of this insect.

How does the system work?

According to David Castro, the head of the Department of Quarantine Entomology at the FDF, "The project includes the release of 3,000 insects each week in 10 homes with domestic vines in the urban sectors of the communes of Quilicura and Conchali, a process that will take place for 28 weeks, so as to cover the three flight cycles of the Lobesia botrana."

A release device, which will be controlled by professionals from FDF and supervised by the SAG, will be installed and left at a vine of each selected house. "The process involves the installation of a release device, and the placing of Lobesia sentinel eggs and an emergency indicator tube for the Trichogrammapretiosum," Castro said.

Castro said this insect was of the Trichogramma genus (as it is almost microscopic in size), and that it affected the eggs of the Lobesia botrana, reducing the possibility that moth larvae

emerge from them. "We've observed in laboratory tests and field cages that the insects affect 56% of the eggs," the researcher added.

Grisel Monje, the executive director of the National Program against the Lobesia botrana of the SAG, said "this technique allows us to use biological control of the flooding type, where we install plaques with eggs of the Trichogramma pretiosum -which is already present in Chile- and release this material every week. This will allow us to reach the urban areas, an area that doesn't respond very well to other control tools, such as chemical controls or the uprooting of plants or clusters. A biological control, however, is very friendly. It has no effect on human health, it is completely harmless, and thus generates no resistance from citizens."

The results will be evaluated once the three cycles the pest has come to an end. Expectations are that this technique will gradually reduce the population of Lobesia botrana, by reducing the percentage of viable eggs of the pest.

A joint effort

The national director of the SAG, Angel Sartori, highlighted "the efforts of the private sector in this initiative. We are trying to perform a biological control. At the experimental level we are working a Sterile Insect Technique, by installing sexual confounders and applying certain chemicals. This is a measure oriented to urban areas. I've always said that the partnership between the public sector and the private sector is very important to control and eradicate this plague."

In turn, the general manager of ASOEX, Miguel Canala-Echeverria, emphasized the importance of intervening in the urban areas to control the Lobesia, as the pest can also be found there. "We can control the pest with chemical applications at the production level, but going into a private house or property to perform chemical applications is impractical. That's why the SAG looks for more friendly alternatives. We have generated two projects that have been developed in a complementary manner; the Sterile Insect Technique and biological control, which run parallel to everything we are doing to control the pest at the productive level," he said.

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