

Sustainable control of the HLB vector in citrus family farming

Scaling up integrated pest management focusing on the citrus greening vector in family citrus growing in Argentina, Uruguay, Paraguay and Bolivia

Argentina/Bolivia/Paraguay/Uruguay

- 

1030

Total monitoring carried out at 17 sites (DP and CP)
- 

-99 %

Population of the HLB vector at one site
- 

+66 %

More natural enemies of the HLB vector
- 

+126

Producers who receive alerts by cell phone
- 

247

Certificates awarded by the course for monitors
- 

+3400

Producers reached, with over 1,900 women
- 

4000

Printed guides “HLB and its vector” delivered
- 

15371

People reached by HLB prevention and management communications



Scaling integrated pest management with a focus on the HLB vector in family citrus farming

Initiative

In order to prevent the advance of HLB in the region, starting in 2019, a proposal was made to adapt and disseminate integrated pest management (IPM) technology to control the HLB vector in family farming (FF). IPM demonstration plots were implemented, along with training, communication and social awareness actions. The impacts of IPM on sustainability, quality and economic

analysis were evaluated. The platform was formed by: INTA/Fundación ArgenINTA (Argentina), INIA (Uruguay), FaCAF UNI/FundUNI (Paraguay), the Autonomous Municipal Government of Bermejo (Bolivia), SENASA and FEDERCITRUS of Argentina and UPEFRUY of Uruguay. Team: 103 researchers, extensionists and communicators.

Control of the HLB vector in citrus within the context of integrated pest management (IPM)

Tech solution

IPM is based on systematic monitoring of the HLB vector (*Diaphorina citri*), natural enemies (*Tamarixia radiata*, etc.), plants with HLB symptoms, phenological monitoring and monitoring of other relevant diseases and pests. A network of IPM demonstrator plots (DP) and conventional plots (CP), also monitored but with regular management by the grower, was established. Based on the monitoring, control actions were implemented in the DPs - biological, cultural, ethological and low-impact chemical methods. An alert system was activated for producers via

cell phone and e-mail with free access to the BioTic INTA-FONTAGRO HLB web portal, along with the development of a prototype of a mobile app for uploading monitoring data. The impact of IPM was evaluated in terms of sustainability, fruit quality at harvest and economic analysis. A virtual and face-to-face training course for pest monitors with certification was technologically and pedagogically designed and a comprehensive communication strategy was implemented. Scaling was applied with a collective innovation management approach.

Dissemination campaign



MORE INFO



Impacts and Results

Monitoring results in the DP (IPM) versus the CP show decreases of the HLB vector between 60-99% in 3 sites and an increase of natural enemies from 17% to 332% in 11 sites. The average environmental impact index in the evaluated DP was positive. The improvement in fruit quality was evidenced by lower incidence of diseases and/or reduced pest pressure. The economic analysis shows that direct IPM costs increased, with higher gross margins in some DP from the second or third season onwards. The following were designed and

implemented: 3 editions of a virtual/on-site course for pest monitors on the INTA PROCADIS Web platform; an alert system with access to the BioTic INTA-FONTAGRO HLB web platform; a prototype app for recording monitoring data; and a graphic and digital communication campaign for the prevention and management of the HLB vector. Other results include participatory workshops, training, and publishing 2 manuals. More than 22,900 people were reached.

Main Donors



Organizations

