

Delivering the strategy in our region

Dr. Richard Shaw (CABI) Dr. Yelitza C. Colmenarez (CABI Latam), Dr Naitram (Bob) Ramnanan

CABI Regional Consultation

September 2025





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Regional Highlights and plans:

- Introduction and overview –
 Dr Richard (Dick) Shaw, Senior Regional
 Director Europe & The Americas
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- Caribbean Review –
 Naitram (Bob) Ramnanan, Regional
 Coordinator, Caribbean



One CABI support

The rest of CABI is ready to support the region's needs

Offering:

Identification of key pests (free service) and mitigation advice (consultancy)

Pest Risk Information Service (PRISE)

Biocontrol solutions





Within season early warning

PRISE: Pest Risk Information SErvice

Developed in Kenya, Zambia, Malawi and Ghana

Combines earth observation derived weather data with pest risk models to give optimum time to action







How we can work with you

Through our experts at CABI, collaborations and experience of building and validating models we deliver:



Model development to give precision timing for interventions against pests/diseases on agricultural and perennial crops, especially integration with biological control agents



Models to look at intervention efficacy i.e. how quickly will the biological control agent take to work?



Embedding modelled information into Good Agricultural Practice advisory services



Bio-input workflow

After bioprospecting useful agents are either freeze dried or cryopreserved



selected agents are mass produced on suitable media



They are then combined with others or packaged singly for farmers to buy and apply with training







Developing a biopesticide pipeline: Learning from another Member Country

- Through the implementation of a Darwin Initiative project, CABI facilitated the establishment of the National Culture Collection, improving access to biological resources and supporting bioprospecting efforts.
- The experience of developing a biopesticide pipeline can be shared with other member countries in the region.

Chilean Microbial Genetic Resources Bank





- The Chilean Collection of Microbial Genetic Resources (CChRGM) is an International Depository Authority (IDA)
- The first Depository Authority in Latin America, and the only IDA in South America.
- Establishment of the National Center for Bioinputs (CeNBI).
- INIA Chile, through its National Center for Bioinputs (CeNBI), develops and markets bioproducts aiming to replace synthetic chemicals with Nature-Based-Solutions based on native microorganisms, reducing the environmental and chemical impact of agriculture.











Delivering the strategy – Latin America

Dr. Yelitza C. Colmenarez (CABI Latam)

CABI Regional Consultation

September 2025

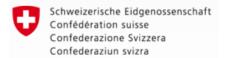


Reinforcing CABI's presence in the region





Key Partners and donors in the region

































































































Climate change / Increasing Temperature



Helicoverpa



Diaporina citri



Suzukii



Drosophila



Bactrocera carambolae Halyomorpha halys



Rhynchoporus ferruaineus



Rastrococcus invandens



Red Palm Mite





Lethal Yellowing



Papayae mealybug





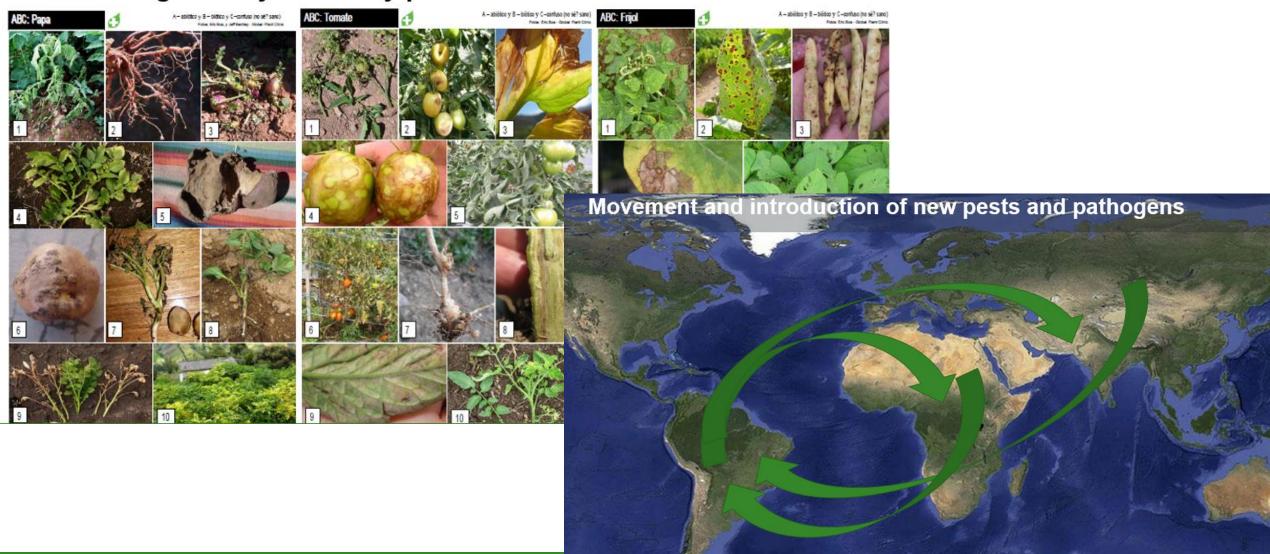


Increase the porfolio and familiarization – Biological Control Agents



Facing the challenges for Sustainability

Challenges - Phytosanitary problems





CABI Compendium

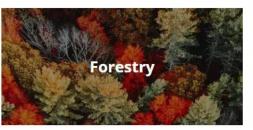
CABI Compendium brings together data and research across species, pests, and diseases into one comprehensive resource. CABI Compendium includes images, maps, and diagnostics and decision support tools such as the Horizon Scanning Tool, Pest Risk Analysis Tool, and the Invasive Species Discovery Tool.













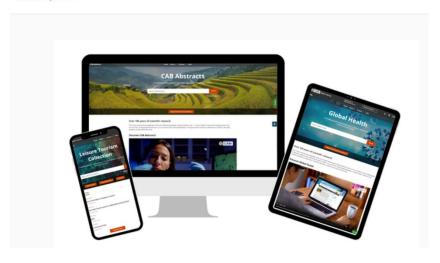




CABI Databases and Collections provided up to date information on key topics, and now available on **CABI Digital Library**

CABI Databases and Collections now available on CABI Digital Library

Author: Wayne Coles



Databases

CABI Databases, including CAB Abstracts and Global Health, bring together millions of research records across agriculture, the environment, human health and the applied sciences to support study, research and practical application around the world. Our comprehensive databases include CAB Abstracts. Global Health. GARA. Thesaurus and search Rxiv.















Authenticated via CABI

Browse products ∨





Yelitza Col... 🗸

CABI Compendium Invasive Species

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About ~

Browse ➤

Help

CABI Compendium Invasive Species

Detailed coverage of invasive species threatening livelihoods and the environment worldwide

Search CABI Compendium Invasive Species

Search





Invasives Open Data



Mobile apps



Country Pest Alerts



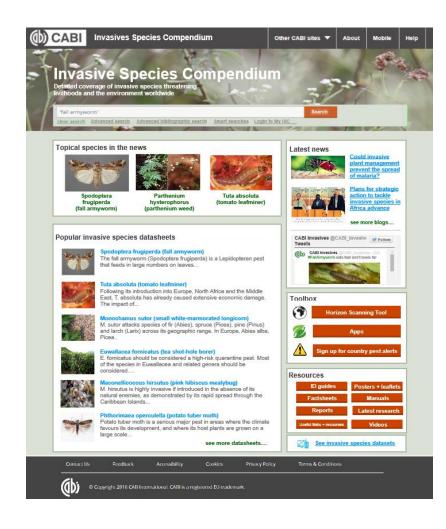
FAW Research Collaboration Portal



Collaboration Platform: Coordinated work with the Ministries of Agriculture – NPPOs – RPPOs



Detailed information on prioritized invasive pest species – Compendium of invasive species



www.cabi.org/isc

Includes

- Species Portals
- Improved Mapping
- Toolbox
- Horizon scanning
- Pest risk analysis (PRA)

Resources

- Diagnostics
- Communication Materials
- Data
- Abstracts
- News







Priority lists – National & Regional

- 1. Fusarium oxysporum f. sp. cubense (raza 4 Trop) en Banana Hongo
- 2. **Zebra Chip** –Candidatus Liberibacter solanacearum Bacteria Transm. *Bactericera cockerelli*
- 3. Coco Lethal Yellowing Fitoplasma
- **4. European Canker of apples** *Neonectria galligena* Bacteria
- 5. Plum box vírus en Durazno Virus
- **6. Tomato ringspot vírus** Virus
- **7. Frosty pod rot:** *Moniliophthora roreri* Hongo
- 8. Pantoea stewartii subsp. stewartii en Maíz Bacteria
- 9. Pitch canker disease in Pine Fusarium circinatum Hongo
- **10.Bacteriosis Vascular del arroz –** *Xanthomonas oryzae* pv. *Oryzae* Bacteria



Sustainable Management of the invasive Croton Scale

Funded by Plantwise Plus and Sandals Foundation (2024-2025)

Evaluations conducted in Grenada and Barbados

Polyphagous pests – Attacking tropical fruits production











Croton Scale

Natural enemies-Biocontrol agents





Mature females and crawlers (babies) (left); parasitize young insects with the parasitoid in development inside of the mummified croton scale insect (right). Photos: YC Colmenarez (CABI).





♠ Exit holes left by emerging new adult parasitoids (left) and adult parasitoids (right). Photos: YC Colmenarez (CABI).





The population of Croton Scale affects the fruits with the present of ants protecting the insects. Photos: YC Colmenarez (CABI) & A. Acosta (CABI Associate).







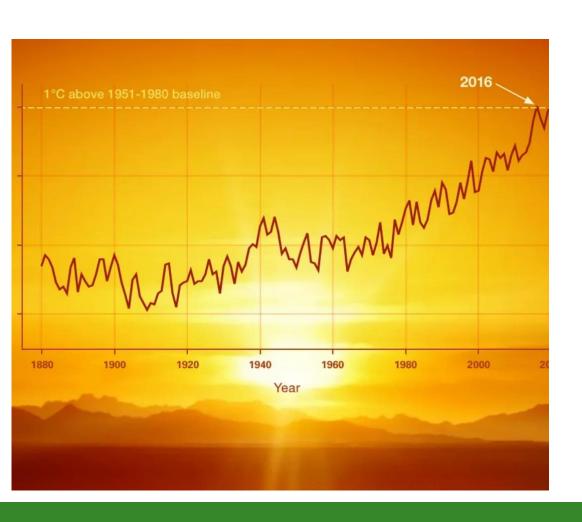


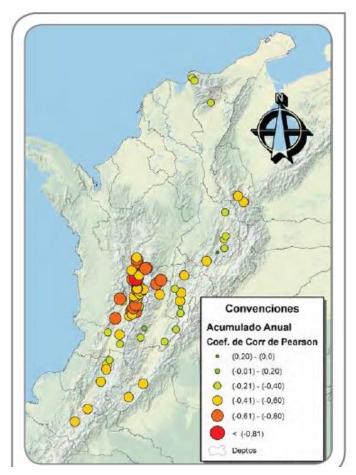
Predators as Natural Enemies of Croton Scale. Photos: YC Colmenarez (CABI) & A. Acosta (CABI Associate)..

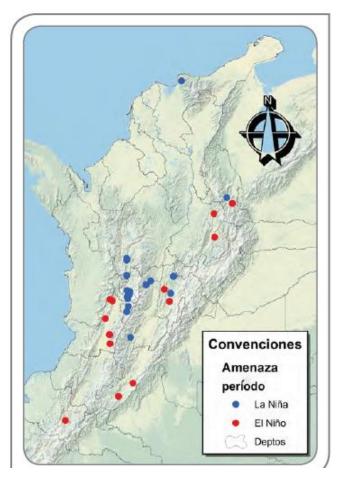




Climate change – Increasing Temperature Coffee Climate threats – El Niño la Niña











Digital innovation to protect Colombian coffee farms and farmers

Funded by:

Agri-Tech Catalyst, Innovate UK (Phase 1) and Darwin Initiative (Phase 2)

Objective of the project:

This project aims to deliver an innovative **pest alert system** to coffee farmers in Colombia, which will help them reduce their reliance on synthetic chemical pesticides.





















Correct moment for application and Evaluation of biological alternatives -

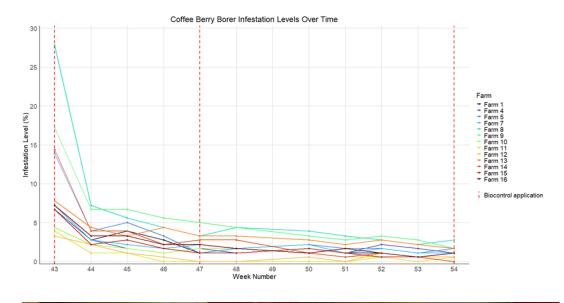


Model – Early Warning Incidence of the pest in a year – Correlation with the most favorable climatic conditions

- Development of the pest
- Optimal conditions for BP application







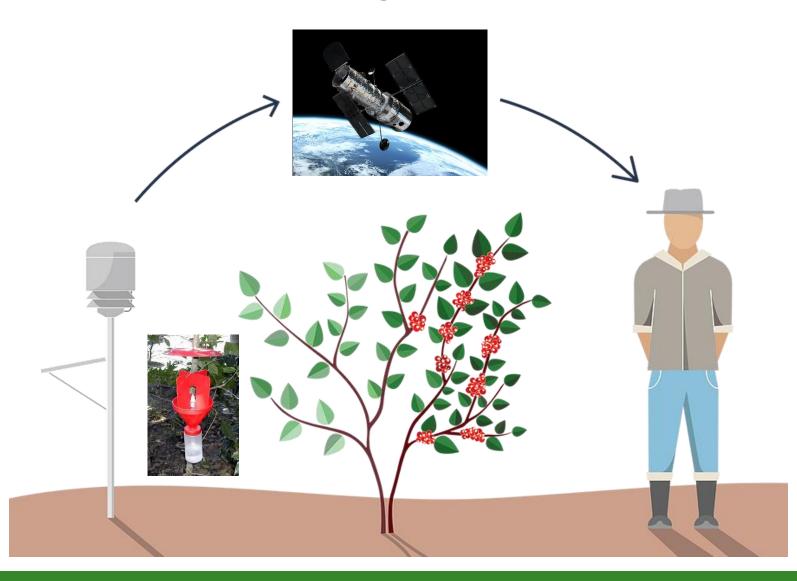






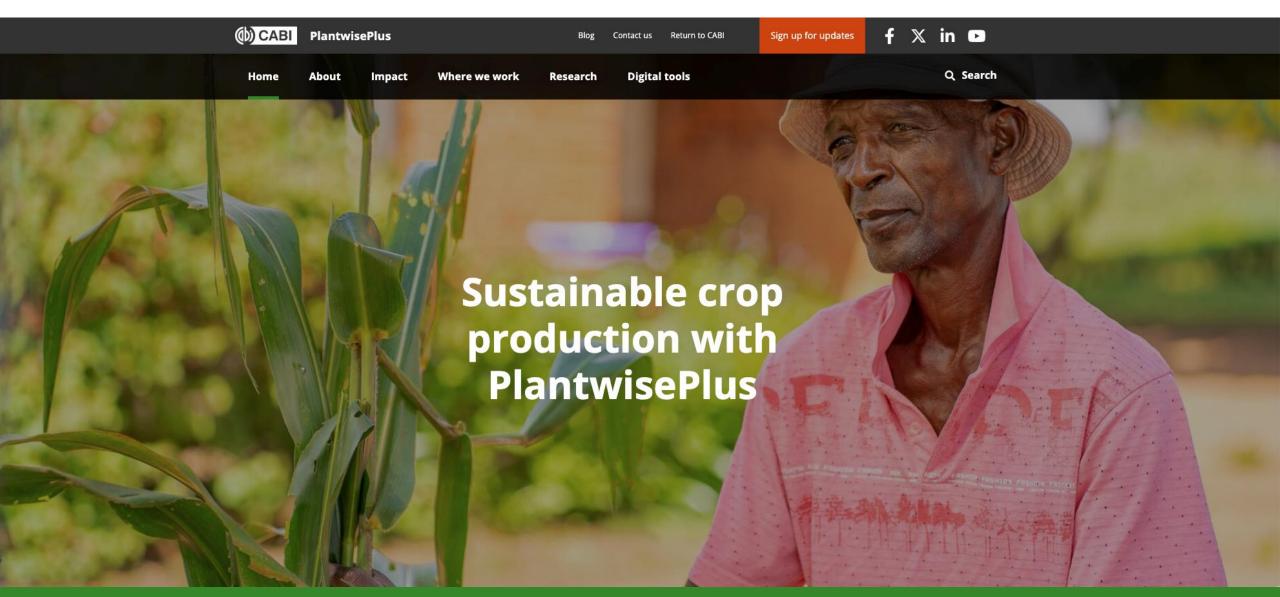


Transferring information to farmers – work done through farmers' associations





PlantwisePlus – global programme





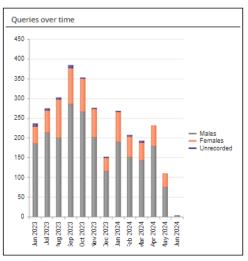
8 Countries in Latin America and the Caribbean

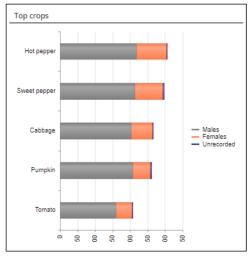


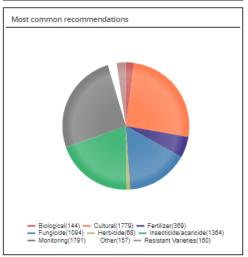


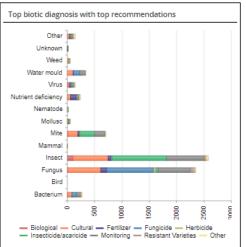
GPS Location of Diagnoses + SAINT Husbands LUCY Checker HIC Diamond Hall SAINT Corner Speightstown PETER Belleplaine Hillaby SAINT Bathsheba JOSEPH HO JAMES SAINT Cherry JOHN Bayfield SAINT GEORGE SAINT HS PHILIP MICHAEL CHRIST CHURCH Rock Hall 1 PATRICK Levera SAINT MARK SAINT SAINT JOHN

Plantwise Online Management System LAC









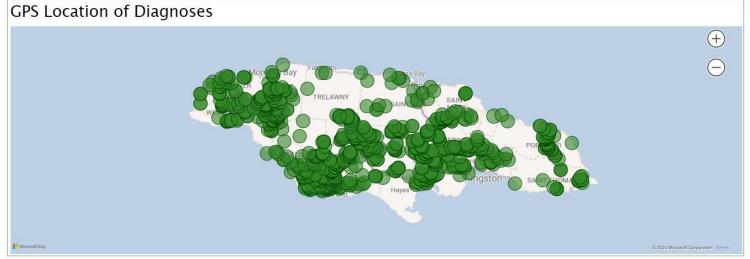




Increasing the reach Use of Digital Technology

Data management	Clinic data	Administrative information	Reports
Facts And Figures		Clinics map	
Clinics established:	131		
Active clinics:	129	+	
Total clinic queries to date:	17458		
Single diagnosis queries:	16785	Jan	naica
Mixed diagnosis queries:	673		4
		ALE STATE OF THE S	

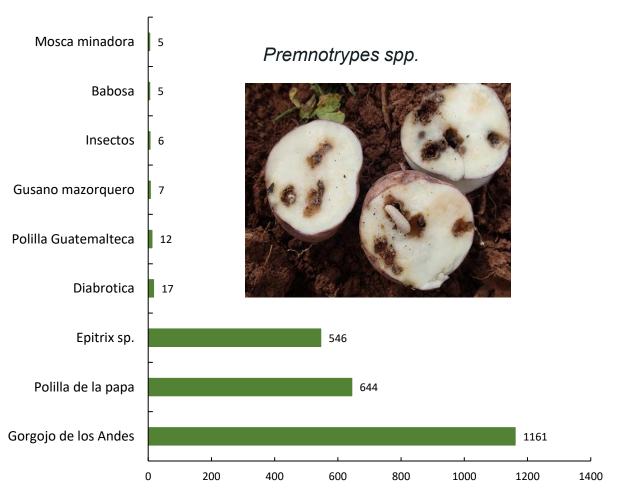




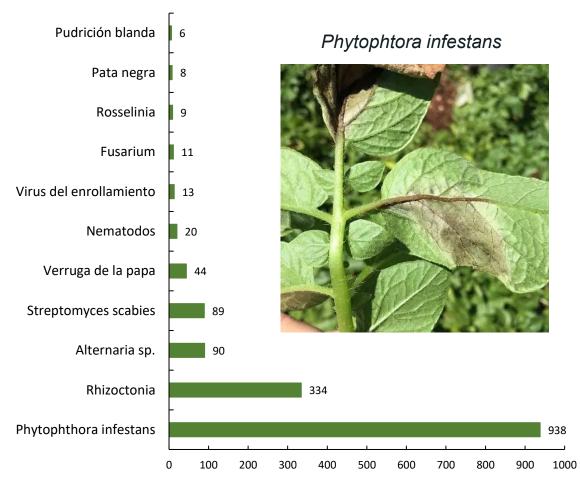


National Data Management System

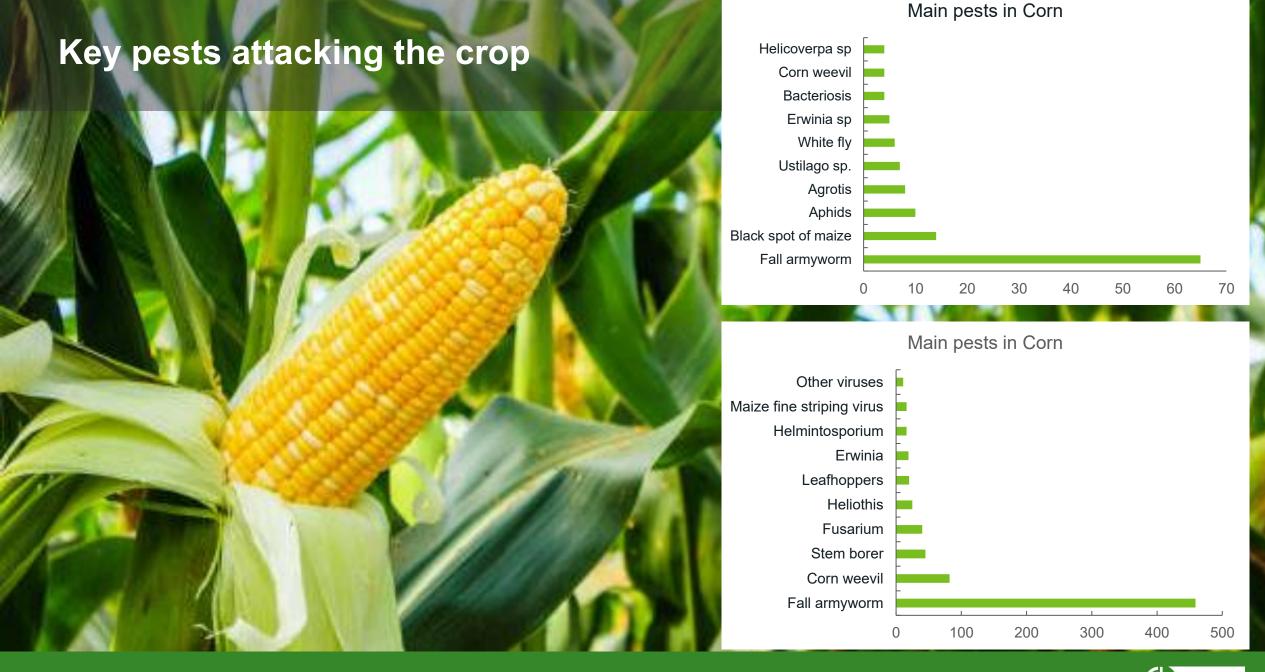




Main diseases of potato











Educating smallholder farmers about nature-based pesticides in Chile

Funded by: Croda Foundation – 3 years

The project will help farmers establish sustainable livelihoods by utilizing nature-based, biological pesticides.

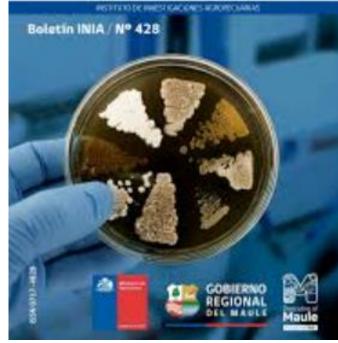
Working together with INIA Chile, farmers are trained to get more familiar with the use of biopesticides.



Croda Project – Linking with the scientific community







The Chilean culture collection offers good opportunities to develop new bioproducts to be applied at the field.









Sustainable Management of the Invasive Tuta absoluta (Lepidoptera: Gelechiidae): an Overview of Case Studies From Latin American Countries Participating in Plantwise

Yelitza C. Colmenárez, ^{1,2,0} Carlos Vásquez, ^{2,0} Adeney de Freitas Bueno, ² Fernando Cantor, ⁴ Eduardo Hidalgo, ⁵ Natalia Comiani, ¹ and Juan José Lagrava⁶

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Subject Editor: Boriz Castro

Received 7 December 2021; Editorial decision 24 March 2022

Tuta absolute (Meytick) (Lepidopteta: Gelechidae) is indigenous to South America. It has invaded several tomato-producing regions worldwide resulting from globalization of commerce and trade. T. absolute is now considered one of the most devestating pests affecting tomato plants and fresh tomatoes. Although tomatoes are the primary host, T absolute can feed and develop on other solanaceous plants as well as plants from other botanical families, including 15 economically important crop species and weeds. Chemical control continues to be the plimaty management option, even in aleas where I absolute is an invasive species. This occurs despite the well-documented effects of chemical insecticides on the environment and its low efficacy. In this article, we discuss the biology, ecology, and a more austainable management for T absolute. The management plan includes periodic monitoring program to improve pest management atrategies by detecting the presence of arrival of the pest in a given host plant, estimating population levels over time, and studying the distribution of the pest. Lastly, we discuss post management from the parapective of Plantwise, an innovative global program which aims to contribute to increased food security, based on its implementation in Bolivia and Costa Rica. In both countries, plant clinics have been established to show fatmets new ways of managing posts in a sustainable way while maintaining crop productivity. The implementation of the Plantwise program resulted in a reduction in posticide use via incorporation of less toxic active ingredients and sustainable pest management strategies such as biological control. Plantwise has encouraged the use of cultural end ethological practices by smallholder farmers in participating countries.

Key words: post management, PlantWise, sustainable střategy

Tuta absoluta (Meyfick) (Lepidoptete: Gelechidae) es ofiginatia de Sudamética. Esta ha invadido vatias regiones productoras de tomate a nivel mundial como resultado de la comercialización y globalización. Il absolute actualmente es considerada una de las plagas más devastadoras que afectan plantas de tomate y los frutos frescos. Aunque el tomate ex el principal hospedante, T. absoluta puede alimentarse y desarrollarse en otras solanaceas, así como de otras familias botánicas, incluidos 15 cultivos de importancia económica y malezas. A pesar de los efectos del control químico sobre el ambiente y la salud pública y su baja eficacia, este sigue siendo la principal opción de manejo, incluso en alteas donde T absolute se considera una especie invasora. En este afficulo, se discute sobre la biologia y ecologia de la especie, así como las estrategias de manejo más sustentables para T absolute, que induye un pfograma de monitofeo constante como estrategia de manejo de plagas mediante la detección de la presencia o llegada de la plaga en una planta hospedante determinada, la estimación de los niveles poblacionales a lo largo del tiempo y el estudio de la distribución de la plaga. Se discute el manejo de plagas desde la perapectiva de Plantwise, un programa global innovador que tiene como objetivo contribuir a reforzar la seguridad alimentaria, con base en su implementación en Bolivia y Costa Rica. En ambos países se han establecido clínicas de plantas

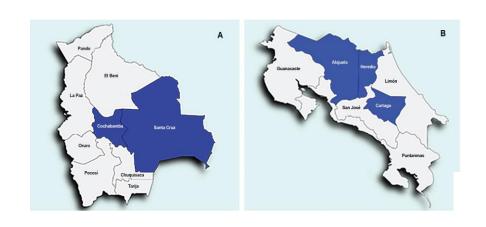
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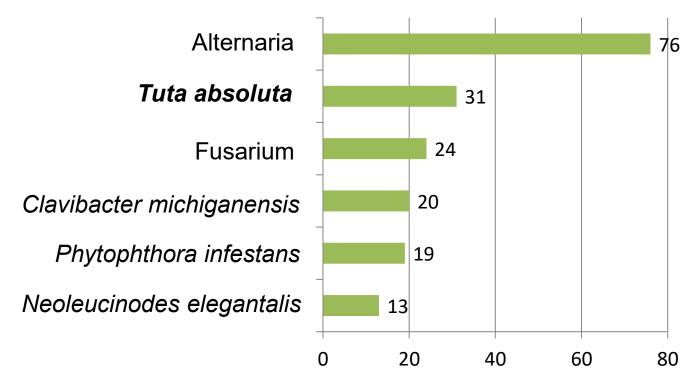


Tuta absoluta case study – Plantwise

Tuta absoluta – Areas evaluated



Main problems reported – Santa Cruz 2020

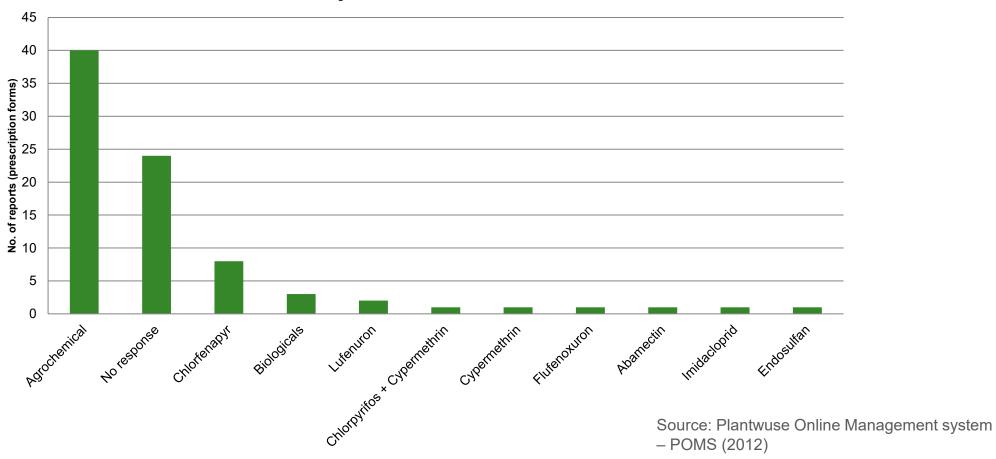


Fonte: DSIA Sta Cruz government, POMS, and verified at field interviews (2020)



T. absoluta is a serious problem: frequent applications of pesticides, including highly toxic pesticides

Methods used by farmers to control *Tuta absoluta*





Integrated Pest Management of Tuta absoluta



Trichogramma pretiosum











Bacillus thuringiensis



Pheromone Traps



Less toxic pesticides



Uso de controladores biológicos, comerciales y naturalmente

presentes

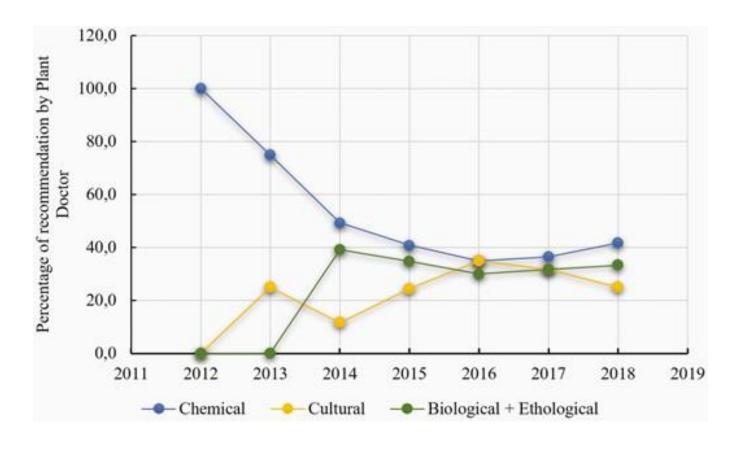


Farmers' and technicians' training on Biocontrol

- Tools developed to facilitate access to information on which bioproducts are available in each country
- Technology transfer adapted to the local context



Biological Control & IPM of Tuta absoluta



Increased use of bioproducts and sustainable practices.

Significant reduction in the frequency of chemical pesticide applications

Use of selective and less toxic products

Colmenarez et al., 2022 – Journal of Integrated Pest management Available at: https://academic.oup.com/jipm/article/13/1/15/6586048



CABI BioProtection Portal



www.bioprotectionportal.com



BioProtection Portal

The largest free resource for biological plant protection

Find bioprotection products for your crop





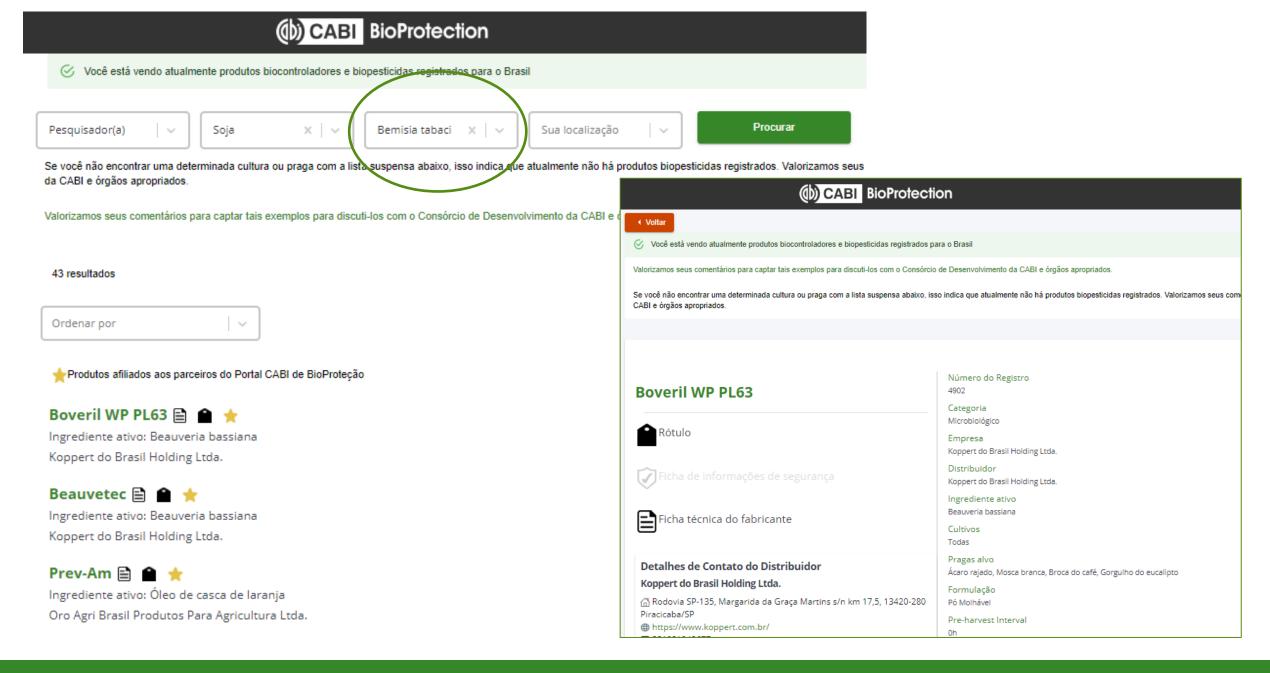
What is bioprotection?

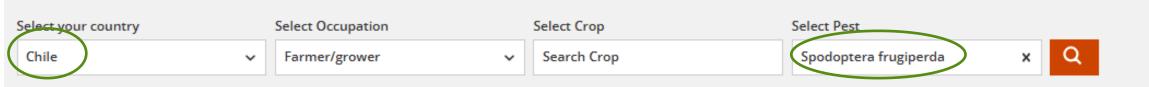
<u>Bioprotection is the use of products that originate from nature to control pests and diseases</u>. At CABI BioProtection Portal, we put bioprotectants into two categories: <u>biopesticides (microbials, semiochemicals, and natural substances)</u> and <u>invertebrate biocontrol agents (macrobials)</u>.

For example, the introduction of beneficial ladybird predators to combat aphid pests (pictured to the right) is a sustainable preventative measure that can retain ecosystem health while establishing long-lasting crop protection. Unlike many conventional pesticides and herbicides, these products are often pest specific,





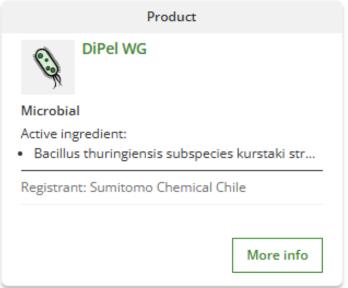




- This biological product has been registered for use in Chile by Servicio Agrícola y Ganadero
- ∴ Hear when new products are added with our email alerts

Showing 1 - 2 of 2 Chile Spodoptera frugiperda









Este producto biológico ha sido registrado para su uso en Chile by Servicio Agrícola y Ganadero

Información básica

Número de registro:

1650

Categoría:

Microbiano

Registrante

Nutrien Ag Solutions Chile

Fabricante

Troy Biosciences Incorporated

Usos permitidos

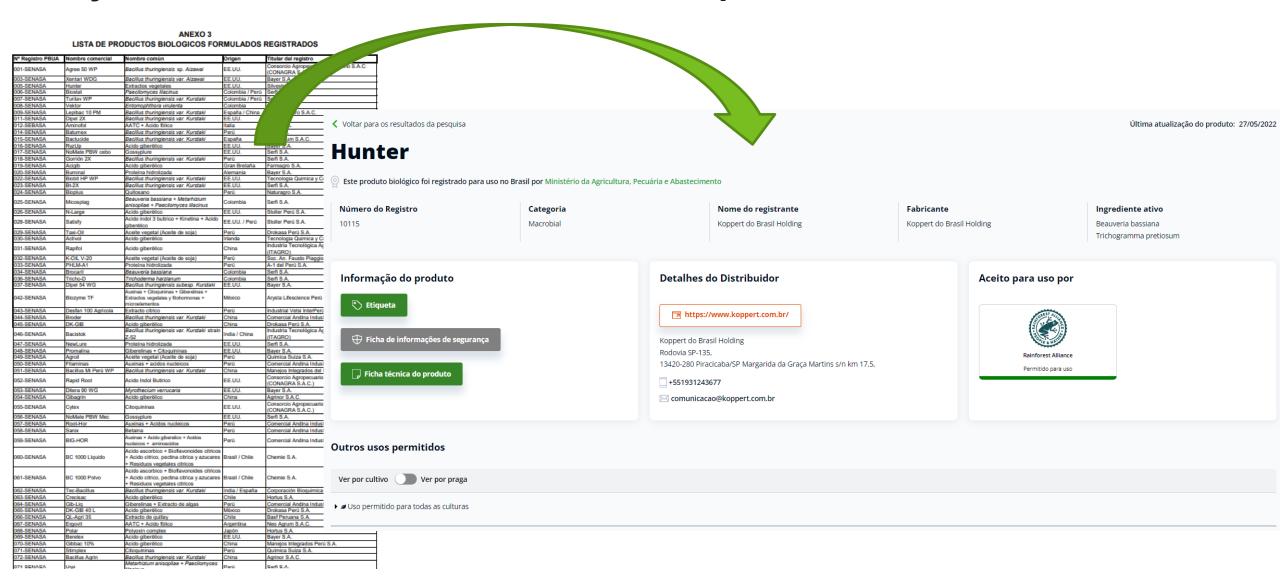
- ▼ Ø Papa
- Aphis gossypii
- ♠ Brevicoryne brassicae
- ★ Escama de las crucíferas
- Mostrar más

- 💃 Arañita
- ♠ Cochinilla harinosa / Cochinilla
- <u>♠</u> Helicoverpa zea

- 🐞 Arañita roja / Araña roja
- ♠ El araña roja / Arañita bimaculada
- ★ Heliothis virescens



Easy access to information on biocontrol products





Establishing partnerships at national and regional level is essential to join efforts with our member countries to tackle priority areas



¿QUÉ ES PROCISUR? LÍNEAS ESTRATÉGICAS PROYECTOS BIBLI





CABI strengthens regional collaboration in Latin America to help advance sustainable agriculture and food security

All news and blogs CABI News CABI Blog PlantwisePlus Blog Invasives Blog Media Centre









Naitram (Bob) Ramnanan, Regional Representative and IAS Coordinator

16 September 2025



Member Countries in the Caribbean



Anguilla



Bahamas



Barbados



Bermuda



British Virgin Islands



Grenada



Guyana



Jamaica



Montserrat



St. Helena



Trinidad & Tobago





Inter-Centre collaboration to support the work of the Region

Africa: invasive species; project development e.g. SPS

Brazil: Plantwise, IPM of Croton Scale

United Kingdom: Pest diagnostics, information and training, Admin support, project development CIASTF, PRISE

Switzerland: Project development e.g. Paddy Rice Bug



Improve the food security and livelihoods of smallholder communities

Help communities adapt to the impacts of climate change

Reduce inequality through better opportunities for rural women and youth

Safeguard biodiversity and support the sustainable use of natural resources

Increase the reach, application and impact of science in agriculture and the environment







MC Benefits: Diagnostic Support

Country	Enquiry/host	Number of Samples				Description
		2022	2023	2024	2025	
Barbados	Insects		1			
	Plants	5	4, 1E	4	7	Kale, Cassava, Banana, Yams, S.P., Okra
Bahamas	Plants		1E			Tomato
Guyana	Plants	4	1E			Rice, weeds/red rice
Grenada	Insects			7	4	
	Plants	1				Maize
Jamaica	Fungal	1E				
	Nematodes 😂	1E				
	Plants		2E	3	1E	Coconut, Sorrel, Okra, Watermelon
Trinidad	Fungal	7				
	Insect	6				
	Fungal Cultures	11	20			Cocoa, TR4, DNA

MC Benefits: Training

Webinars

2025: Writing effective policy briefs from your research: 24 September 2025

2024: Biopesticide registration for CABI MC in the Caribbean. 4 parts that lead to the development of a road map for registering biopesticides in the Caribbean.

2024: Science Communication for researchers: 5 part series

2023: Guidelines for isolation and identification of *Fusarium oxysporum f.sp cubense* Tropical Race 4 from banana, 10 November 2023.

Master of Advance Studies ICM: xx trained

Certificate of Advance Studies in ICM: xx trained



Projects

Plantwise

Biosecurity in the UKOT

RSPB Biosecurity Training course

Croton Scale

Conserving Barbados' Endemic Reptiles

IAS Barbados and the OECS







Plantwise

Regional Pest Risk Analysis Training Programme

Goals

- 1. Training on pest-initiated PRA
- 2. To develop PRAs on 4 priority pests, pathways and a biological control agent for the Caribbean region
- 3. To introduce PRA decision support tools: the CABI Compendium, Horizon Scanning Tool and PRA Tools
- 4. To introduce the concept of the regional pest risk register and Pest Risk Monitoring







Biosecurity in the UKOT

Review of biosecurity at air and seaports in 5 UKOTs

- Inspection of all relevant infrastructure, and equipment at air and sea ports
- Reviewed Bio-security practices in place specific to plants and animals
- Conduct basic risk management
- Recommendations for enhancing biosecurity at both air and seaports.







RSPB Biosecurity Training course

Biosecurity officer training programme for 5 Caribbean UKOTS

- Develop a Training of Trainers Biosecurity course for the Caribbean UKOT
- Deliver face to face training to biosecurity officers, customs, vet services, plant quarantine, wildlife/forestry and public health: November 2025
- Virtual discussion sessions on selected topics to share information and experiences to improve 5 national biosecurity systems
- Possibility of making this available via a CABI Academy course to wider Caribbean







Croton Scale

Integrated Pest Management of Croton Scale Insect

- Detected in mid-2020
- Arrived via imported ornamental plants from Florida, USA
- Confirmed as Phalacroccus howertoni
- Sandals Foundation, and Plantwise funded the development of an IPM strategy and trained farmers in its adoption
- Significant success in its control with minimal pesticides
- Demonstrated sustainability of nature-based solutions and what a functional CIASTF can do to manage IAS in the Caribbean.







Conserving Barbados' Endemic Reptiles (CEBER)

Reducing the threats to endangered reptiles from habitat loss and Invasive Alien Species (IAS) through enhanced biodiversity governance and strengthened bio-security in Barbados

- Support the development of the National Biodiversity Bill and associated polices and regulations.
- Raise awareness of the impact of IAS on endemic reptiles and establish a Reptile Conservation Centre at ragged point
- Train nationals on biodiversity conservation
- Install a biosecure fence at Ragged Point and implement a Species Recovery Plan
- Survey for the thread snake was successful as two confirmed for the first time in over 20 years







IAS Barbados and the OECS

Preventing the COSTS of IAS in Barbados and the OECS

The project's goal is to manage the risks and COSTS of IAS on important ecosystems, species and genetic diversity in Barbados and the OECS region.

The project's objective is the development of "Prevention, early detection, control and management frameworks for invasive alien species (IAS) that emphasize a risk management approach by focusing on the highest risk invasion pathways of Barbados and OECS countries".





Risk assessment of high-risk pathways completed

Marine Risk Assessment

Ornamental Horticulture

Pet and aquaria trade

International Trade: focused on the risks posed by trade in used equipment and vehicles; tires; wood and wood products and agricultural commodities

Passenger luggage





Control and management of key IAS in Antigua and Barbuda

Eradication of IAS from Redonda, Green Island Smith Island and Maiden Island.

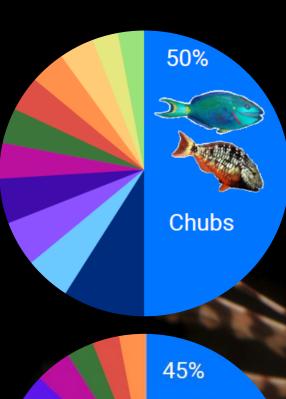
Establishment of new and **improved biosecurity mechanisms** on Redonda and other critical offshore islands to detect and prevent incursions by IAS

Two years after eradication of rats and goats on Redonda:

- 6 fold increase in Redonda Ground Lizard;
- Appox. 50% increase in seabird population
- 10 fold increase in vegetative cover

Redonda declared as a national protected area.



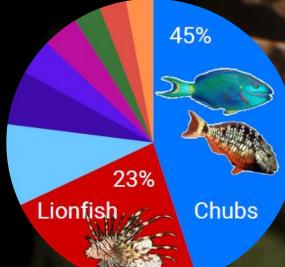


Pre-invasion

Lionfish Assessment and Management in High Biodiversity Value Reefs in Barbados

Lionfish

- Densities have remained relatively low
- Have not damaged reef fishes important to coral reef health
- Have not affected the quantity of fish being caught by reef fishers
- Is effectively controlled by spear fishing



Post-invasion









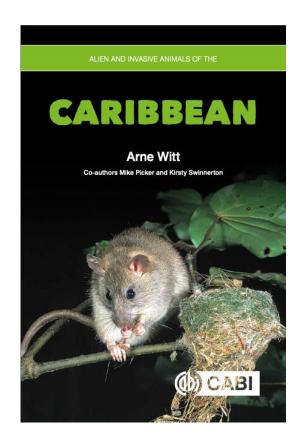
Tools to enhance surveillance and prevention of IAS in the Caribbean developed and distributed

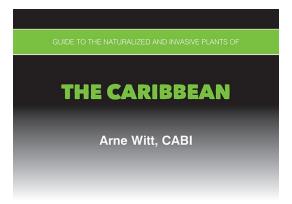
Caribbean Bio-security Interception System (CBIS) developed and scaled up by the USDA/CPHD to the wider region.

Field guides:

Alien and Invasive Animals of the Caribbean

Guide to Naturalized and Invasive Plants of the Caribbean











Projects developed with partners for funding

PRISE/CARDI/Bahamas

Paddy rice bug in Guyana

CIASTF with CBF





Delivering the strategy in our region

Dr. Richard (Dick) Shaw (CABI)

CABI Regional Consultation

September 2025



Challenges

The region benefits from the whole of CABI not just the team you see here but we need to grow our footprint to better serve MCs

Funding

General – reducing availability and fragmented

Specific to Plantwise – region not prioritised

Trying to partner when funding is tight (also an opportunity)



Opportunities

Bioprotection pipelines for MCs.

Plantwise classic and PW+ alternate funding models

Invasive Species – CIASTF

Digital tools as a Country level service/ Al to support evidence-based policy making

South-South cooperation across the CABI family

Microbiome learnings

Pesticide Risk Reduction – see tomorrow!





CABI as an international intergovernmental not-for-profit organization, gratefully acknowledges the generous support received from our many donors, sponsors and partners. In particular we thank our Member Countries for their vital financial and strategic contributions.

