



Food and Agriculture  
Organization of the  
United Nations



International  
Plant Protection  
Convention

# Strengthening Member State Capacities to Combat Banana Fusarium Wilt (TR4) through Early Detection, New Resistant Varieties, and Integrated Management – INT5158

**Cinthya Zorrilla**

**Plant Breeder and Geneticist**

**FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture**





## Scope

The purpose of this project is to **strengthen the capacities of Member States** in the prevention and containment of Fusarium wilt disease (*Foc* TR4) in bananas through **surveillance, early detection, genetic resistance, and integrated management.**



### Participating Countries

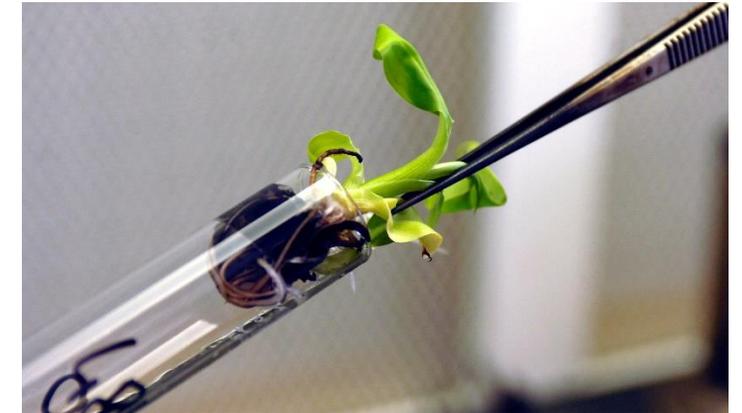
- Bolivia
- Brasil
- Colombia
- Costa Rica
- Ecuador
- Mexico
- Nicaragua
- Panama
- Paraguay
- Peru
- Dominican Republic
- Saint Lucia
- Venezuela

## Inter-Regional:

Africa + Asia + Latin America and the Caribbean

## Multi-Disciplinary:

NPPOs + NARIs + Universities/Private Sector



Source: FAO/IAEA Center



Source: INIA-Venezuela

## Relevance to the IPPC

This project contributes to the implementation of **IPPC article XX** related to technical assistance to contracting parties.

It **promotes collaboration** between NPPOs and research institutions such as NARIs and local Universities.

It also **promotes an integral approach** to combat plant disease-related challenges.

It is a **platform to exchange experiences** among NPPOs from different countries in Latin America, and with other regions in the future.



Source: FAO/IAEA Center

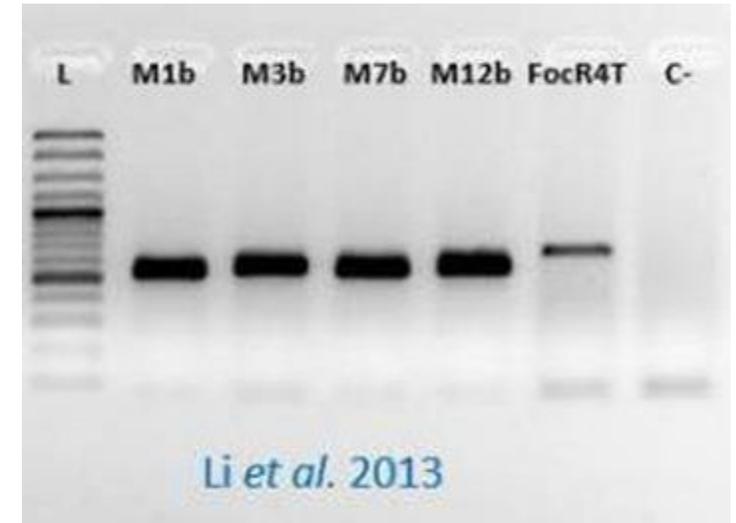


Source: FAO/IAEA Center

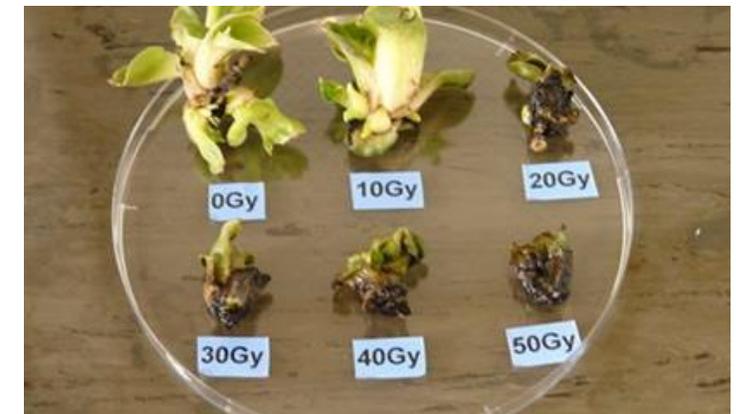
## Main outputs

The expected outputs of this project include:

- **Strengthening** institutional capacities on the **vigilance**, early detection and contention of *Foc* TR4.
- **Strengthening** capacities of laboratories on **molecular diagnostics** methods.
- **Strengthening** capacities of research institutions in **tissue culture** and **screening methods** to evaluate resistance.
- Establishing/empowering a **diagnostics laboratory**.
- **Development of genetic resistance** to the disease.



Source: SENASA - Peru



Source: FAO/IAEA Center

## Success and challenges

This project conducted two Regional Training Courses, one Meeting, and one Symposium during 2022:

- **Regional Training Course on Mutation Breeding and Efficiency Enhancing Techniques for Resistance to Banana Fusarium Wilt Race TR4 in Latin America**; a total of 14 scientists from 7 Latin American countries were trained; 14-25 February 2022.
- **Regional Meeting**; 21-23 March 2022, Guayaquil, Ecuador.
- Symposium - **Global Research in the Management of Banana Fusarium Wilt TR4**; 24-25 March 2022, Quito, Ecuador.
- **Regional Training Course on Detection and Diagnostics of Fusarium Tropical Race 4 (Foc TR4)**; a total of 12 scientists from 10 Latin American countries were trained in Detection and Diagnostics Methods for Foc TR4; 10-14 October 2022.



Source: FAO/IAEA Center



Source: FAO/IAEA Center



## Success and challenges

Challenges to consider in the future:

- **Interregional exchanges**, time differences, language barriers.
- How to **integrate our efforts with other efforts in place** at local and regional level.
- How to **facilitate field screening of resistance** in genetic material generated by participating Member States.



Source: FAO/IAEA Center



Source: INIA-Venezuela



Food and Agriculture  
Organization of the  
United Nations



International  
Plant Protection  
Convention



Plant Breeding and Genetics Section

<https://www.iaea.org/about/plant-breeding-and-genetics-section>

# Thank you

**IPPC Secretariat**

Food and Agriculture Organization  
of the United Nations (FAO)

[ippc@fao.org](mailto:ippc@fao.org) | [www.ippc.int](http://www.ippc.int)

