

Approved Specification: Plant Pest Emergency Simulation Tool (2024-002)

1. Title

Plant Pest Emergency Simulation Tool (2024-002)

2. Type of implementation and capacity development product

Online simulation game

3. Convention articles, ISPMs and CPM recommendations to be addressed by the proposed implementation resource

- International Plant Protection Convention (Article IV.2.(e))
- ISPM 4: *Requirements for the establishment of pest free areas*
- ISPM 6: *Surveillance*
- ISPM 8: *Determination of pest status in an area*
- ISPM 9: *Guidelines for pest eradication programmes*
- ISPM 10: *Requirements for the establishment of pest free places of production and pest free production sites*
- ISPM 14: *The use of integrated measures in a systems approach for pest risk management*
- ISPM 17: *Pest reporting*
- ISPM 22: *Requirements for the establishment of areas of low pest prevalence*
- ISPM 27: *Diagnostic protocols for regulated pests*

4. Scope

This online IPPC simulation game is designed to facilitate capacity development of national plant protection organization (NPPO) technical staff and stakeholders involved in emergency response activities when a new pest is detected in a country. The focus is on the decisions and actions taken by the NPPO to respond to a new pest detection.

5. Purpose

The simulation game will be a capacity development tool aimed at NPPO technical staff, and other government agencies and stakeholders that are involved in emergency responses when a pest of concern is detected post border.

Simulation exercises are a valuable preparedness tool for countries to test their current response practices and identify areas of weakness. Such exercises are scenario-based drills that mimic real-world pest detections or outbreaks to determine a country's preparedness before the pest of concern arrives in the country. Some pests such as *Fusarium oxysporum* f.sp. *cubense* Tropical Race 4 (Fusarium TR4), which has been identified as a pest of serious concern by many banana growing countries, cannot be eradicated once it establishes in an area. Therefore, prevention, preparedness, and timely response are critical to stopping spread of such pests.

For some countries it may not be possible to undertake simulation exercises in person due to cost and lack of facilitation and resource. In such cases, this online tool can be used to train new staff and refresh skills of existing NPPO staff but also to engage stakeholders in other government agencies and industry who are essential for a successful response. Through the simulation, the users will be able to consider the information and scenario presented to make decisions that will lead to various outcomes such as successful eradication, pest containment to an area, or failure to contain leading to spread of pest. This will lead to better understanding of key elements necessary for a successful response.

6. Content for the proposed implementation resource

The simulation game proposes to use two high-risk pests as examples: a pathogen (e.g., *Fusarium* TR4) and an insect (e.g., *Spodoptera*). The IPPC Secretariat is proposing to work with the Food and Agriculture Organization (FAO) eLearning Academy to develop the simulation tool.

The concept includes:

- using the fictional country and setting developed for the tabletop simulation exercise to develop a scenario for the simulation game, including characters and setting,
- providing brief pest factsheets (description, biology, impact) for the two pests that users can use to make risk management decisions,
- identifying critical control points in the simulation game that will impact the outcomes of the decisions made by users, such as:
 - probable pathways of pest entry and spread,
 - does the pest have a restricted distribution in the area or has it spread,
 - was the pest detected in one area or are there multiple detection events,
 - are surveillance methods effective in detecting the pest when it is present,
 - were there existing quarantine and phytosanitary measures in place to prevent introduction of the pest,
 - are quarantine and farm-level biosecurity measures in place to prevent further pest spread,
 - is there an existing contingency plan that can be deployed after the first detection of the pest,
 - availability of resources, including financial and human resources,
 - is an effective national response team in place and is there good cooperation with stakeholders,
 - is there sufficient capacity to undertake diagnostics during the emergency response.

7. Financial and in-kind contributions

Strengthening Food Control and Phytosanitary Capacities and Governance project
([GCP/GLO/949/EC](#))

8. Selection criteria for working group experts

The IPPC Secretariat is proposing that instead of issuing a call to establish a new working group for this simulation game, the experience and knowledge of experts from the following existing groups will be utilized to review the parameters and contents of the simulation game as well as to test the game once developed:

- the Implementation and Capacity Development Committee (IC) Team on *Fusarium* TR4 who have contributed to the peer-review of the table-top simulation document,
- NPPOs (Ecuador, New Zealand and Peru) who reviewed the *Fusarium* TR4 table-top simulation exercise,
- Working group that developed the IPPC Emergency Preparedness guide,
- FAO Regional Office for Mesoamerica who have completed several simulation exercises in the region to prepare countries against the risk of *Fusarium* TR4.

9. References and supporting materials

IPPC guides and training materials, including the following:

- [Emergency Preparedness: A guide for developing contingency plans for outbreaks of quarantine pests](#)
- [Prevention, preparedness and response guidelines for *Fusarium Tropical Race 4* \(TR4\) of banana](#)
- [Prevention, preparedness and response guidelines for fall armyworm \(*Spodoptera frugiperda*\)](#)
- [Pest Status Guide](#)
- [Surveillance and pest status determination e-learning course](#)

