



## **SPECIFICATION 50**

# **Protocol to determine host status of fruits to fruit fly (Tephritidae) infestation**

**(2010)**

### **Title**

Protocol to determine host status of fruits to fruit fly (Tephritidae) infestation (2006-031).

### **Reason for the standard**

Determination of host status of fruits to fruit fly (Tephritidae) is a fundamental element in PRA, including pest risk management. There is evidence to indicate that some fruits listed in scientific literature as hosts to specific fruit flies are actually not hosts or are very poor hosts. However, these host records have in some cases resulted in the imposition of unnecessary or overly restrictive phytosanitary measures by NPPOs on such fruit commodities. Given this, there is need for an internationally harmonized protocol to determine host status in order to facilitate trade. This ISPM will have a highly beneficial impact for both importing and exporting countries.

The host status category for hosts of fruit flies is a fundamental concept for other ISPMs concerning fruit flies (e.g. PFAs, ALPPs, systems approaches). Hence, categories of and procedures for determining the host status should be harmonized in this ISPM so that the harmonized terminology can be applied in other ISPMs.

### **Scope and purpose**

The standard will provide guidelines for the determination of the host status of fruits to fruit fly infestation. It will also introduce a standardized terminology to describe different types of host status, taking into account terminology used in previous adopted fruit fly standards.

The guidelines should focus on the methodology, statistical design and procedures underpinning laboratory and field trials that may be adopted to ascertain the host status of fruits to fruit fly infestation.

### **Tasks**

The Technical Panel on Fruit Flies (TPFF) is to:

- (1) Define categories of fruit fly host status.

- (2) Draft a comprehensive procedures guideline for the determination of host status of fruits to fruit fly infestation that includes the following aspects:
  - (a) an experimental outline for laboratory procedures and information used to determine host status including:
    - clear identification of fruit fly species
    - clear identification of fruit species and cultivars used
    - physiological stage of the fruit
    - fruit fly source (wild or laboratory colony) used for forced infestations including details of laboratory culture such as number of generations the flies have been reared in the laboratory, host from which the first generation of insects were collected
    - control hosts
    - fruit fly female age used for forced infestations
    - fruit fly density used for forced infestations
    - conditions for fruit storage after infestation
    - experimental design
    - spray history of fruit
    - geographic conditions of the area
  - (b) describe methodology for the determination of fruit fly hosts under field conditions
    - clear identification of fruit fly species
    - clear identification of fruit species and cultivars used
    - fruit fly trapping layout (fruit species and varieties, phenological stages)
    - fruit sampling (number of samples, size etc.) under natural conditions
    - detection record at import and export inspections
    - control hosts
    - relevant aspects of production of fruit
    - experimental design
  - (c) definition of the parameters that should be taken into account in order to determine fruit fly host status
  - (d) criteria to determine host status in relation to fruit physiology and environmental conditions, including temperature, photoperiod, and relative humidity
  - (e) criteria to quantify and interpret the data to ascertain the host status under the experimental design outlined above
  - (f) criteria for extrapolation of data to other areas and fruits
- (3) Define criteria under which historical information on host status could be used as an alternative or as a complement to a comprehensive procedures guideline under task (2).
- (4) Consider whether the new ISPM could affect in a specific way (positively or negatively) the protection of biodiversity and the environment, and if so, the impact should be identified, addressed and clarified in the ISPM.
- (5) Consider implementation of the standard by contracting parties and identify potential operational and technical implementation issues. Provide information and possible recommendations on these issues to the SC.

### **Provision of resources**

Funding for the meeting may be provided from sources other than the regular programme of the IPPC (FAO). As recommended by ICPM-2 (1999), whenever possible, those participating in standard

setting activities voluntarily fund their travel and subsistence to attend meetings. Participants may request financial assistance, with the understanding that resources are limited and the priority for financial assistance is given to developing country participants.

### **Collaborator**

To be determined.

### **Steward**

Please refer to the list of topics for IPPC standards posted on the IPP (see <https://www.ippc.int/index.php?id=207776>).

### **Expertise**

Experience and skills include:

- experience with or understanding of the methodology used in the determination of host status of fruit to fruit flies
- expertise with more than one genus of fruit fly and experience with fruit flies in several regions
- knowledge of ISPMs and good writing skills (desirable).

### **Participants**

TFFF and other experts if deemed necessary.

### **References**

The IPPC, relevant ISPMs and other national, regional and international standards and agreements as may be applicable to the tasks, and discussion papers submitted in relation to this work.

**APPPC RSPM No. 4.** 2005. Guidelines for the confirmation of non-host status of fruit and vegetables to *Tephritid* fruit flies.

**NAPPO RSPM No. 30.** 2008. Guidelines for the determination and designation of host status of a fruit or vegetable for fruit flies (*Diptera: Tephritidae*).

### **Discussion papers**

Participants and interested parties are encouraged to submit discussion papers to the IPPC Secretariat ([ippc@fao.org](mailto:ippc@fao.org)) for consideration by the expert drafting group.

#### **Publication history**

*This is not an official part of the specification*

2006-11 SC added topic *Determination of host status of fruits and vegetables to fruit fly (Tephritidae) infestation* (2006-031)

2009-05 SC revised draft text and approved for MC

2010-02 MC

2010-04 SC revised and approved specification

2011-11 reformatted

2011-12 applied consistency changes in line with the decision made by SC May 2009

2012-11 SC replaced task regarding implementation issues

**Specification 50.** 2010. *Protocol to determine host status of fruits to fruit fly (Tephritidae) infestation*. Rome, IPPC, FAO.

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