Draft International Standards for Phytosanitary Measures

Consultation 2010

Draft Annex to ISPM 27: 2010
(Diagnostic protocols for regulated pests)
Plum pox virus

Outline of presentation

- Background
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  - Pest information
  - Taxonomic Information
  - Detection and identification
  - Identification of strains
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Background

- This proposed annex to ISPM 27: 2010 (Diagnostic protocols for regulated pests) provides information on *Plum pox virus*, its detection and identification, and the identfication of strains.

- Drafted by the Technical Panel on Diagnostic protocols (TPDP). The topic was added to the work programme by CPM-1 (2006)

- Approved for member consultation by the standards committee in 20XX. The April 2010 SC agreed to sent this diagnostic protocol for member consultation through the special process in 2010.

Outline of draft Annex

- *The draft protocol presents and overview of Pest Information and Taxonomic Information*
  - *Plum pox virus (PPV) affects fruit trees of the genus Prunus. Management costs estimated at 10,000 million euros since 1970*
  - *PPV is transmitted by aphids in the field, but infected propagative material is the main way PPV is spread over long distances*

Outline of draft Annex – Detection and Identification

- *The draft protocol provides specific guidance for detecting and identifying PPV using biological, serological or molecular tests*
  - ***Biological detection of PPV***
    - *Grafting is widely used in certification schemes and is a reliable and sensitive method of detection. There is no published quantitative data on specificity, sensitivity, and detection.*
    - *It is not a rapid test, symptoms take many weeks to develop.*

Outline of draft Annex – Serological Detection of PPV

– ***Serological detection and identification of PPV***

- *Highly recommended for screening large numbers of samples.*
- *Two types of enzyme-linked immunosorbent assays (DASI-ELISA and DAS-ELISA); availability of kits for PPV detection are described.*

Outline of draft Annex – Molecular Detection of PPV

– ***Molecular detection***

- *Molecular methods may be more expensive and time consuming than serological methods but are generally more sensitive.*

– *Methods, primers, procedures are presented for*

- *Reverse transcription-polymerase chain reaction (RT-PCR)*
- *Immunocapture RT-PCR*
- *Co-operational RT-PCR*
- *Real-time RT-PCR*

Outline of draft Annex – Identification of strains

- *Serological and molecular detection methods can also be used to identify PPV strains, e.g. the principal strains (D and M)*
- *It is not necessary for NPPOs to determine which strains of PPV are present; but identification or characterization of PPV-type can yield important information in first detections in a country or in an extensive area.*

Main discussion points during devlopment of the diagnostic protocol

- *The mimimum requirements for the identification of PPV and in particular strains of PPV*
- *Inclusion of requirements for identification of PPV in different circumstances, e.g. “routine diagnosis of a pest widely established in a country” as opposed to “detection of a pest in a consignment originating in a country where the pest is declared to be absent”*