Pest Surveillance

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Define Survey

➢ An official procedure conducted over a defined period of time to determine the characteristics of a pest population or to determine which pest species occur in an area (ISPM No. 5)
Define surveillance

- An **official** process which collects and records data on **pest occurrence** or absence by **survey, monitoring** or other procedures (ISPM No. 5)
Define official control

- The active enforcement of mandatory **phytosanitary regulations** and the application of mandatory **phytosanitary procedures** with the objective of **eradication** or **containment** of quarantine pests or for the management of regulated non-quarantine pests
New Revised Text (1997)
Article IV

• the surveillance of growing plants, including both areas under cultivation (inter alia fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, and of plants and plant products in storage or in transportation, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling those pests, including the reporting referred to under Article VIII paragraph 1(a)
Types of surveillance

- General surveillance
- Specific surveys
General Surveillance

- Literature Sources
- Collection, storage and retrieval of information
- Use of information
General surveillance

• NPPOs, other national and local government agencies,
• Research institutions, universities, scientific societies (including amateur specialists), museums, scientific journals
• Producers, consultants, the general public, and trade journals, unpublished data and contemporary observations.
• FAO, RPPOs, etc.
Utilization of sources by the NPPO

• NPPO acts as the national repository for plant pest records
• a record keeping and retrieval system
• data verification procedures
• communication channels to transfer information from the sources to the NPPO.
Utilization of sources by the NPPO

Incentives to report info such as:

• legislative obligations (control measures)
• cooperative agreements
• use of contact personnel to enhance communication channels to and from NPPOs
• public education/awareness programmes.
Use of information

- to support NPPO declarations of pest freedom
- to aid early detection of new pests (EW)
- for reporting to other organizations such as RPPOs and FAO
- for compilation of pest lists.
General Surveillance by PRA

• During the import PRA process
• During the compilation of pest information packages
Specific Surveys

- Detection,
- Delimiting,
- Monitoring surveys.

Official surveys should follow a plan which is approved by the NPPO.
Specific Surveys

• the purpose and the PS requirements to be met,
• identification of the target pest (s),
• identification of scope,
• identification of timing (dates, frequency, duration),
• in the case of commodity pest lists, the target commodity,
• indication of the statistical basis,
Survey methodology and quality management

- sampling procedures,
- biology of pest,
- purpose of survey diagnostic procedures,
- reporting procedures.
Pest survey Information

- to support NPPO declarations of pest freedom
- to aid early detection of new pests
- reporting to other organizations such as RPPOs and FAO.
Pest Survey Sites

The selection of suitable survey sites may be determined by the:

- reported presence and distribution of the pest
- biology of the pest
- distribution of **host plants** of the pest and especially of their areas of commercial production
- climatic suitability of sites for the pest.
Pest Survey Timing

Timing of survey procedures may be determined by:

• life cycle
• phenology of the pest and its hosts
• pest management programmes
• whether the pest is best detected on crops in active growth or in the harvested crop.
Commodity or Host Surveys Info

• for pest lists of commodities produced under specific cultural practices.

• preparation of host pest lists where data from general surveillance is lacking.
Commodity or host surveys sites

The selection of suitable survey sites may be determined by:

- **geographical distribution** of production areas and/or their size,
- pest management programmes,
- cultivars present,
- points of consolidation of the harvested commodity.
Commodity or host surveys procedures

- Survey procedures will be timed in relation to crop harvesting and will depend on the selection of a sampling technique appropriate to the type of harvested commodity.
Good Surveillance Practice

• Personnel should be adequately trained
• Personnel be audited, in sampling methods, preservation and transportation of samples for identification and record keeping associated with samples.
• Equipment and supplies should be used and maintained adequately.
• Methodology used should be technically valid.
Technical Requirements for Diagnostic Services

The NPPO should provide appropriate diagnostic services. Characteristics of the diagnostic services include:

- expertise in disciplines relevant to pest (and host) identification
- adequate facilities and equipment
- access to specialists for verification where necessary
- facilities for record keeping
- facilities for processing and storing of voucher specimens
- standard operating procedures,
- Verification of diagnoses
Record Keeping

Information in the records should include:

- scientific name of pest
- family/order
- scientific name of host, and plant part affected or means of collection
- locality, e.g. location codes, addresses, coordinates
- date of collection and name of collector
- date of identification and name of identifier
- date of verification and name of verifier
- references, if any
- additional information,
- stage of plant affected, or found only in greenhouses.
Transparency

• The NPPO distribute reports of pest presence, distribution, or absence from surveys.
• Reports should be adequately referenced in relation to pest occurrences.
To remember

- Survey is to the benefit for your country
- Fruit flies are not the only disastrous pest
- USA has recently many new pests
- We can find any exotic pest any time
- Awareness is the best detector and happens when we talk to people
- So talk to people.
Thank you