



Guidelines for Surveillance

Definition

An official process which collects and records data on pest occurrence or absence by survey, monitoring or other procedures





Scope of Surveillance Standard

- Describes components of survey and monitoring systems for use in:
 - detection of pests
 - pest risk analyses
 - establishment of pest free areas
 - the preparation of pest list





General Surveillance

- **Use of information**
 - support declarations of pest freedom
 - aid early detection of new pests
 - report to other organisations (FAO, RPPO)
 - compilation of host and commodity pest lists and distribution records





General Surveillance

- **Sources**

- NPPO or designated institution acting as national repository for plant pest records
- research institutions, universities, scientific bodies
- producers, consultants
- museums, general public,
- scientific and trade journals
- contemporary observations
- regional and international sources





General Surveillance

- **Collection, Storage and Retrieval**
 - NPPO or other institution designated as 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





General Surveillance

- **Collection, Storage and Retrieval System (cont'd)**
 - Incentives to report such as:
 - legislative obligations
 - cooperative agreements (between the NPPO and specific agencies)
 - use of contact personnel to enhance communication to and from NPPO
 - public awareness/education programmes





Specific Surveys

- Detection- presence or absence
- Delimiting- to establish boundaries of infested or non infested area
- Monitoring- ongoing survey to verify characteristics of a pest population





Specific Surveys

- Should include:
 - definition of purpose
 - target pest
 - scope (geographic area, production system)
 - timing (dates, frequency, duration)
 - target commodity (if applicable)





Specific Surveys

- Should include:
 - **statistical basis**
 - level of confidence
 - number of samples
 - number of sites
 - frequency of sampling
 - assumptions





Specific Surveys

- Should include a description of survey methodology and quality management to explain:
 - sampling procedures (attractant trapping, whole plant sampling, visual inspection, sample collection and laboratory analysis)
 - diagnostic procedures
 - reporting procedures





Pest Surveys

- **Selection of survey sites**
 - previously reported presence and distribution
 - biology of pest
 - host plant distribution
 - climatic suitability of sites
 - points of entry
 - possible pathways of spread





Pest Surveys

- **Timing of survey procedures determined by:**
 - life cycle of pest
 - timing of pest management programmes
 - stage of host plant attacked





Pest Surveys

- **Timing of survey procedures determined by:**
 - life cycle of pest
 - timing of pest management programmes
 - stage of host plant attacked





Commodity or host surveys

- **Selection of suitable survey sites determined by:**
 - geographic distribution of production areas and/or size
 - pest management programmes
 - cultivars present
 - points of consolidation of harvested commodity





Pest Surveys

- Sampling may be targeted or random
- should be designed to favour detection except where quantitative indication is required





Good Surveillance Practice

- Should be conducted by adequately trained personnel in plant protection and data management
- personnel should be audited in sampling methods, preservation and transportation of samples for identification and record keeping
- appropriate equipment and supplies should be used and properly maintained





Technical requirements for diagnostic services

- expertise in disciplines relevant to pest identification
- adequate facilities and equipment
- access to specialists for verification





Technical requirements for diagnostic services

- facilities for record keeping
- facilities for processing and storing voucher specimens
- used of standard operating procedures





Record keeping

- **Information should include:**
 - scientific name of pest and Bayer code if available
 - family/order
 - scientific name of host and Bayer code if available and means of collection
 - locality
 - date of collection and name of collector





Record keeping (cont'd)

- **Information should include:**
 - date of identification and name of identifier
 - date of verification and name of verifier
 - references if any
 - additional information (pest/host relationship, infestation status etc)





Transparency

- The NPPO should on request, distribute reports of pest presence, distribution, or absence derived from general surveillance and specific surveys.



DOMINO EFFECT

SURVEILLANCE



PEST LISTING



PEST CATEGORIZATION



PEST RISK ANALYSIS



**SCIENTIFIC JUSTIFICATION
FOR PHYTOSANITARY
MEASURES**

