IMPLEMENTATION REVIEW AND SUPPORT SYSTEM

Review of the Implementation of ISPM-6

Challenges and Best Practices

International Plant Protection Convention (IPPC)
Food and Agricultural Organization of the United Nations
Via delle Terme di Caracalla 00153
Rome, Italy

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Contents

Abbreviations and acronyms

ALPP	Agricultural Land Preservation Policy
AOAD	Arab Organization for Agricultural Development
APHIS	Animal and Plant Health Inspection Service (USAID)
APPO	African Plant Protection Organization
ASEAN	Association of Southeast Asian Nations
CABI	Centre For Agriculture And Biosciences International
CIPMC	Central Integrated Pest Management Centre
COPE	Centre of Phytosanitary Excellence
CWWGM	Crop weather watch group meeting
EAPIC	East Africa Information committee
EPPO	European and Mediterranean Plant Protection Organization
ETL	Economic threshold level
FAO	Food and Agriculture Organization of the United Nations
FERA	Food and Environment Research Agency
FFS	Farmer Field Schools
GPS	Global Positioning System
HTFA	High Temperature Forced Air
ICAR	International Committee for Animal Recording
IICA	Inter-American Institute for Cooperation on Agriculture
IPGRI	International Plant Genetics Resource Institute ????
IPM	International pest management
IPPC	International Plant Protection Convention
ISO	International Standards Organization ???
ISPM	International standards for phytosanitary measures
LCU	Locust control units
NaCRRI	National Crop Resources Research Institute-Namulonge (Uganda)

NAFTA	North American Free Trade Agreement
NPPO	National Plant Protection Organization
PDR	People's Democratic Republic (Laos)
PEQ	Post-entry quarantine
PFA	Pest Free Area
PPD	Plant Protection Directorate
QP	Quarantine pest
RNQP	Regulated Non-Quarantine Pest
SDA	State Departments of Agriculture
SPS	Sanitary and Phytosanitary Measures/Standards
TYLCV	Tomato yellow leaf curl virus
UAE	United Arab Emirates
USAID	United States AID
USDA	United States Department of Agriculture
WTO	World Trade Organisation

Report on activity carried out for ISPM No. 6 (1997): Guidelines for surveillance

Background

Pest surveillance is a foundation activity of National Plant Protection Organizations (NPPOs). Outputs of a pest surveillance activity provide countries with the basis for listing regulated pests, determination of pest status in an area and pest categorization, all of which enable the conduct of pest risk analysis. In 1997 the IPPC approved *ISPM No. 6: Guidelines for surveillance as a basis to guide NPPOs in implementing pest surveillance*. In 2011 the IPPC initiated the Implementation Review and Support System (IRSS) project focusing on ISPM 6 and also flagged the standard for review under the standard setting work programme.

As part of the activity under IRSS, and to contribute to the review of ISPM 6, the IPPC developed a questionnaire that was administered to 177 contact points in the seven FAO regions and feedback was received from the following 106 contact points in different regions as follows:

- Africa: Benin, Burkina Faso, Burundi, Cameroon, Comoros, Côte d'Ivoire, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, RDC, Senegal, Sierra Leone, South Africa, South Sudan, Togo, Uganda, Zambia
- Asia: China, India, Japan, Laos PDR, Malaysia, Myanmar, Nepal, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, Vietnam
- The Caribbean: Dominica, Trinidad and Tobago, Belize, St Kitts, Suriname, St Lucia, Jamaica, Barbados, Grenada, Antigua and Barbuda
- Eastern Europe & Central Asia: Albania, Armenia, Azerbaijan, Belarus, Bosnia Herzegovina, Georgia, Kyrgyzstan, Macedonia, Moldova, Montenegro, Tajikistan, Uzbekistan
- European Union member states: Belgium, Estonia, France, Germany, Hungary, Greece, Ireland, Lithuania, Poland, Slovenia, United Kingdom
- Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Mexico, Nicaragua, Panama, Paraguay, Peru
- Near East: Iraq, Lebanon, Morocco, Oman, Palestine, Sudan, Syria, United Arab Emirates
- North America: Canada and the United States

- Southwest Pacific: Australia, Cook Islands, Fiji, Papua New Guinea, New Zealand, Samoa, Tonga, Vanuatu

The questionnaire was also sent to Regional Plant Protection Organizations (RPPOs) and shared with FAO staff members.

Scope of the questionnaire

The questionnaire was derived primarily from sections of the text of ISPM-6 on resources, and activities that are part of pest surveillance programmes envisaged by the standard. Broadly these elements cover policy and legislative environment; organizational structure, competencies and culture; documented procedures; general surveillance, specific surveys, pest diagnostics and resources. In addition it provided for the respondents to present any priority areas that countries would wish to see added to the revised ISPM-6.

This report presents global information from the data captured by the IRSS study on ISPM-6 under the same sub-titles as in the IRSS questionnaire with feedback on the questionnaires summarized in reports for each region (Annex I) that were presented and further discussed at the regional IRSS workshops held in January – February 2012. Raw data from the questionnaires, technical resources and good practices provided in the country feedbacks are presented in annexes II, III and IV. Responses to various sections of the questionnaire are summarized graphically in Annex V. The annexes are an integral part of this report.

A. Policy and legislative environment

The policy and legislative framework for pest surveillance in countries that participated in this IRSS activity indicate that globally, pest surveillance is primarily a responsibility of National Plant Protection Organizations (NPPOs). The principal factors influencing surveillance programmes in these countries are trade policies, particularly those pertaining to free trade agreements and agricultural trade. Obligations under national and/or regional plant protection laws, directives and regulations are also important determinants of surveillance programmes. Pest surveillance services have strategic and operational plans in 64 percent of the countries. The mandates, functions and responsibilities of organizations involved in the conduct of pest surveillance are provided in written documents in 58 percent of the countries that gave feedback on the questionnaires.

Outstanding policy and legislative features are:

- NPPOs are primarily responsible for pest surveillance in the majority (97 percent) of countries.
- Surveillance responsibilities of the NPPOs is not limited to regulated pests (quarantine pests and regulated non-quarantine pests) but also cover non-regulated pests of national concern in more than 80 percent of the countries.
- Besides the NPPOs, other agencies (public and/or private organizations or departments) are also mandated to perform pest surveillance in 66 percent of the countries

Despite (iii) above, 70 percent of countries indicated that their NPPOs are able to conduct pest surveillance activities in a coordinated manner with these public/private organizations, with 78 percent of the countries stating that the staff of their NPPOs have sufficient powers/authority to carry out their work. In cases where the NPPO staff involved in pest surveillance are unable to carry out their work because of a lack of such authority/power, results of surveys conducted by the other agencies are provided to the NPPOs only in 33 percent of the countries. In emergency situations, NPPOs can legally mandate the use of other public/private organizations to undertake surveys in 69 percent of the countries.

Globally, it is a common feature that more than one organization with strategic and operational plans as well as mandates, functions and responsibilities of these organization provided in written documents are involved in surveillance work in nearly all countries. However, NPPOs in these countries do not readily access results of surveillance activities undertaken by these organizations. From the feedbacks obtained, it cannot be ascertained if the surveillance undertaken in a country by organizations other than the NPPO is in the context of ISPM-6 and contributes to performance of national phytosanitary systems.

B. Organizational structure, competences and culture

Indicators used by countries to measure the relevance and performance of their pest surveillance programmes are many and varied. These generally include, *inter alia,* interceptions involving exports; numbers of pest outbreaks; numbers of surveys and survey results; numbers and dates of surveillance activities; ratio of the numbers of sites surveyed to the numbers planned for survey; number of pests detected/identified/categorized; Pest Free Areas (PFAs)/infested areas identified and adherence to protocols for surveillance.

Many countries indicated that they engage a number of varied stakeholders to support and improve efficacy and effectiveness of pest surveillance service with 82 percent of the countries

reporting that they include stakeholders in the planning team whenever there is an emergency situation. The stakeholders used by different countries are largely from research organizations or institutions dealing with agriculture, forestry, environment and natural resources; universities; industry representatives or associations, i.e. producers, and traders; local/regional governments; other governmental agencies/ministries; chambers of commerce/associations of manufacturers; surveillance reference groups; registered growers; specific commodity interest groups and the general public.

Pest surveillance programmes have well-developed and compatible data systems to collect, store and report pest information in only 50 percent of the countries and only 46 percent of the countries reported that they have procedures to review performance of their pest surveillance programmes or services. Seventy-three percent of countries reported that they have organizational charts for the pest surveillance service with 79 percent indicating that their NPPOs have formal linkages with external sources of information. National Plant Protection Organizations engage relevant stakeholders to support and improve the quality of pest surveillance services in 76 percent of the countries.

The organization structure and competency to conduct surveillance exist in most countries to provide for engagement of relevant stakeholders. This neither contributes to improved systems for collecting, storage and reporting of pest information nor to development of procedures to review performance of surveillance programmes. Follow-up actions, involving systems evaluation of selected countries, may help identify suitability of the existing structures to deliver under the NPPO pest surveillance mandate.

C. Documented procedures

NPPOs in only 51 percent of countries use a computerized retrieval system for surveillance information. Likewise, only 45 percent of countries indicated that their NPPOs have an operational manual for general pest surveillance with just 56 percent of the countries indicating that they use Global Information Systems (GIS) coordinates to specify the location of pests detected during surveys. Ninety-one percent of the countries indicated that their NPPOs keep information on scientific names of pests, 86 percent indicated the same for information on plant parts affected 85 percent the same for information on geographical location of pests; 80 percent information on the name of identifier; 77 percent the same for information on date and name of the collector 73 percent the same for information on means of collection and date and 62 percent the same for information on the name of the verifier.There is a disparity between countries concerning information management systems such as computerized data

storage and retrieval, technical resources for consistency in the conduct of surveillance work such as operational manuals and pieces of equipment such as GIS. These present areas with inadequacies that constrain surveillance in most countries.

D. General surveillance

Countries compile information for compiling pest records from more or less the same kinds of sources. These include reports from NPPOs, research organizations and other institutions/individuals including consultants; international databases, e.g. Centre For Agriculture And Biosciences International (CABI); Regional Plant Protection Organization (RPPO) databases; scientific and trade journals; scientific societies; special commodity institutions; plant health committees, national museums, universities, regional pest information resources and databases; interception records; contemporary observations; unpublished data; personal communications and the general public.

Sixty-three percent of the countries indicated that they have national databases of plant pest records but only 55 percent stated that the databases are easily accessed by NPPOs. The proportion of plant pest records that can be verified from insect or culture collections is variable (Figure 1). The majority of countries rated the level of resources required for general pest surveillance as intermediate or marginal (Figure 2) but many (76 percent) reported that they have a public service to identify pests.

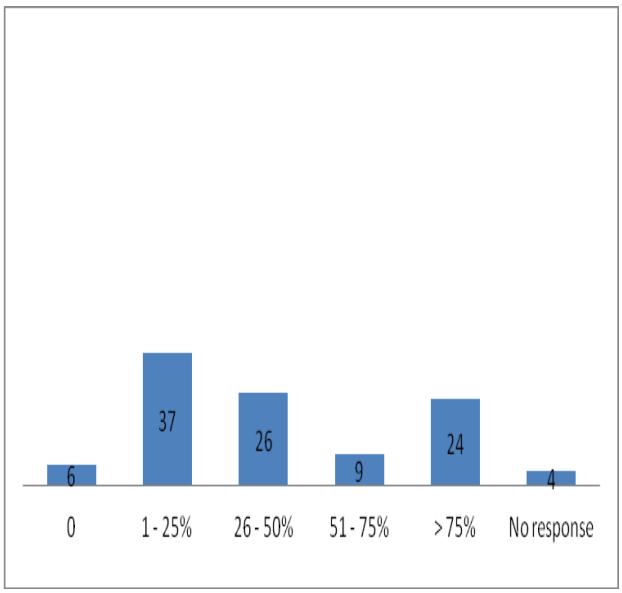


Figure 1: Responses to the question 'what proportion of plant pest records can be verified from insect or culture collections?'

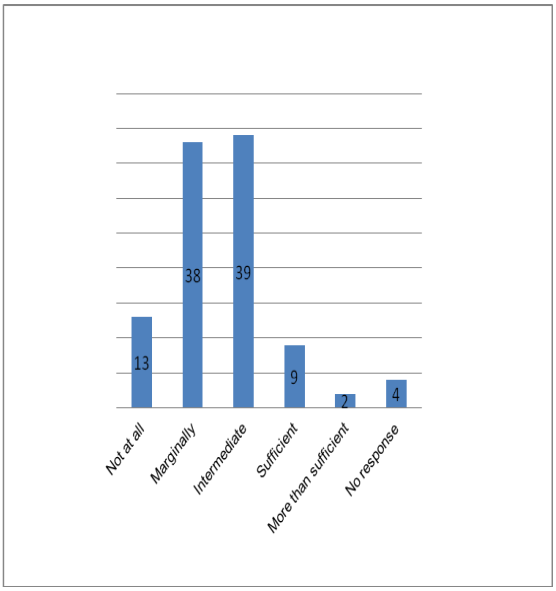


Figure 2: Country ratings of the sufficiency of resources required for general pest surveillance

The same/similar kinds of information sources are used by different countries to compile pest records. However, differences exist between countries for information management systems and possibly the ability of NPPOs to access/put to use the information sources in the same way. Authentication/verification of some of the information obtained from these sources is stated to be necessary for developing accurate pest records but is generally limited by inadequate resource allocation and limited support for surveillance activities.

E. Specific surveys

The number of plant species or plant products that are officially surveyed for pests on a regular basis is variable (Figure 3). Numbers and types of plants/plant products listed by countries are variable between regions but broadly include selected food/staple crops, forest trees, commercial/industrial crops, horticultural crops, etc.

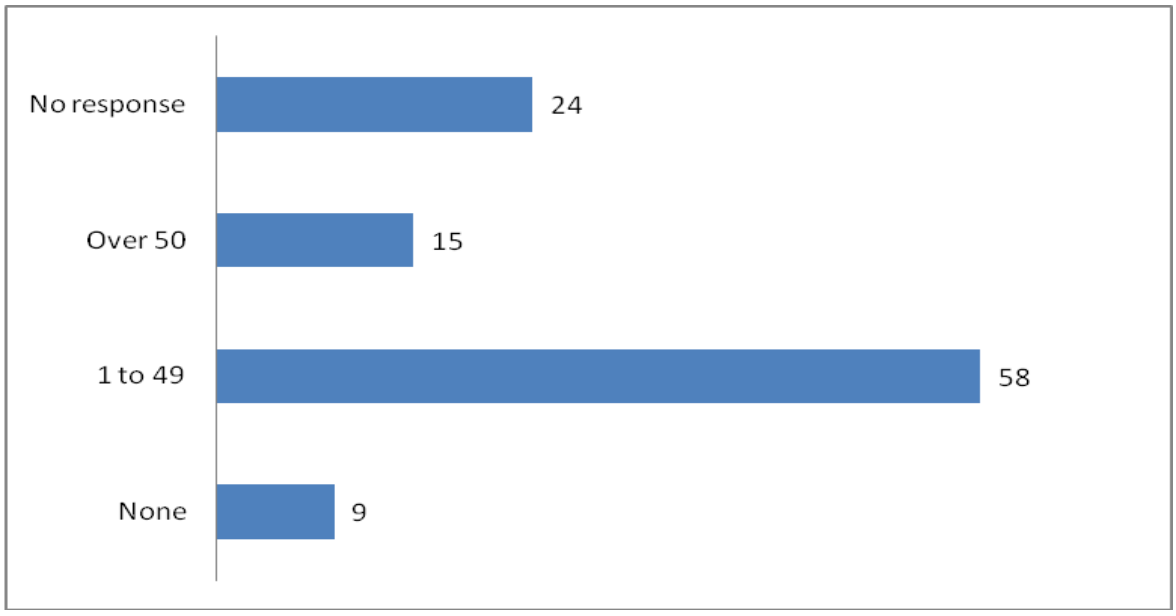


Figure 3: Responses to the question 'How many plant species or plant products grown in the country are officially surveyed for pests on a regular basis?

In most countries more than one organization decides which plant species/plant products are officially surveyed. These include, *inter alia*, biosecurity agencies (including NPPOs and forest service institutions), ministries responsible for agriculture, forestry, natural resources, environment, research organizations and commodity export groups. The reasons for initiating a specific survey by country are many and vary but include those relating to pest status, trade concerns, outbreaks, early warning, emergency action, pest listing, pest occurrence and pest reporting.

Several countries (75 percent) indicated that they have a specific manager with overall responsibility for surveillance activities. Fifty-nine percent of countries indicated they have specific pest survey procedures described in operational manuals with 48 percent stating that the performance, efficiency, efficacy and relevance of the manuals are periodically evaluated. Only 18 percent of countries have agreements between NPPOs and industry (or private institutions) to cover expenditures for surveys while 32 percent have such agreements between the NPPO and other public institutions or agencies.

Country responses present a mixed scenario (Figure 4) concerning agreements between NPPOs and public institutions on expenditures for specific surveys, surveys related to specific outbreaks and surveys related to pest free areas (PFAs) and ALPPs.

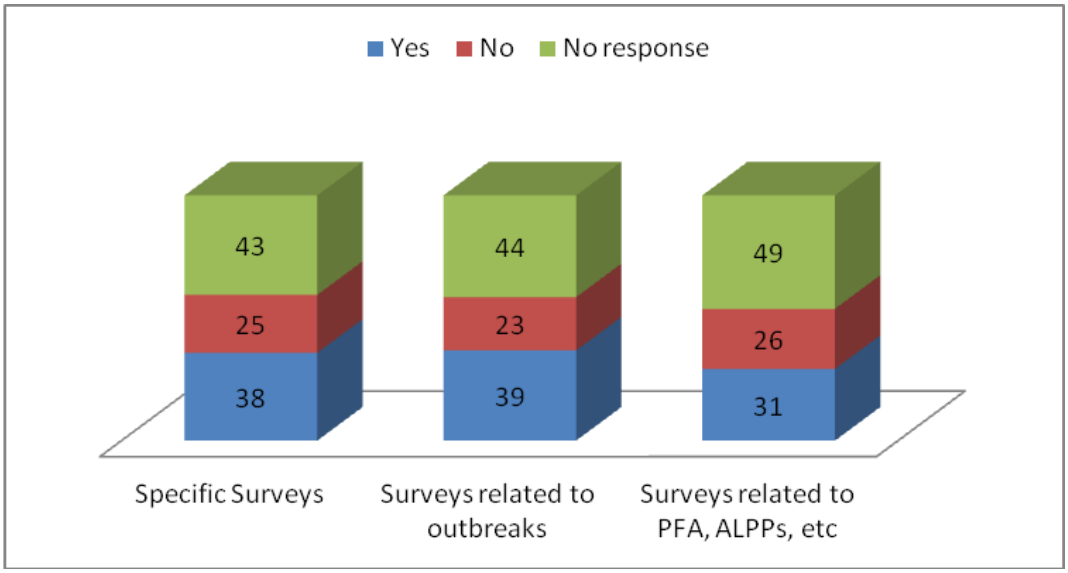


Figure 4: Responses to the question 'what are agreements between NPPO and public institutions covering expenditures for specific surveys, surveys related to outbreaks, surveys related to PFAs, ALPPS, etc?

Countries generally have more than one organization with the authority to decide which crops should be surveyed; this could create a situation of institutional conflict and poor coordination. In many countries it is reported that there are manuals for specific surveys. However, the review of performance of surveys conducted according to these manuals is uncommon as there is limited appropriate public-public and public-private partnerships for specific surveys as exemplified by the low percentage of the number of countries with agreements between NPPOs and industry (or private institutions) or other public institutions or agencies to cover expenditures for surveys. Thus, NPPO control over pest surveillance programmes may not be guaranteed.

F. Pest diagnostics

In many countries (64 percent) the NPPO is not the sole provider of pest diagnostic services but pest diagnostic laboratories are optimally situated to take into account the geographic demands for diagnostic laboratory services in 68 percent of the countries. In countries having more than one NPPO laboratory, these are managed centrally at national levels only in 40 percent of the cases.

The NPPO laboratories co-operate through formal arrangements with one another and with other institutions inside the country for pest diagnostics only in some (55 percent) of countries. The NPPOs have formal arrangements with other laboratories or institutions outside the country for pest diagnostics only in 40 percent of the countries. Likewise, NPPOs use virtual diagnostics, i.e. transmission of images of pests to a central diagnostic service inside or outside the country in only 40 percent of the countries.

Documented procedures for sampling, sample delivery, intermediate storage and disposal are in use in only some (48 percent) of the countries. Such documented procedures for diagnostics, traceability, reporting, etc. are reported to be present in only 46 percent of countries. However, diagnostic laboratories are reported to verify their performance/results with other pest diagnostic laboratories inside or outside the country in 57 percent of the countries. Only in a few countries are the NPPO pest diagnostic laboratories (23 percent) or of other institutions (24 percent) accredited to formal ISO standards, e.g. ISO 17025.

Staff are sufficiently qualified and trained to perform pest diagnostics and use relevant laboratory equipment, analytical methods, etc. necessary to support pest surveillance activities in 39 percent of the countries. Laboratories provide the pest surveillance staff with collection kits for different types of specimens and samples in 40 percent of countries while phytosanitary NPPO surveillance plans take into account the required laboratory support in 50 percent of the countries with the laboratory staff participating in the preparation of pest surveillance plans in 48 percent of the countries. When planning for pest surveillance, costing of activities that might be needed under pest diagnostic services is done separately in 38 percent of the countries. Diagnostic laboratories provide training on taking samples and field recognition of pests and their symptoms to the staff involved in pest surveillance in 64 percent of the countries.

Pest diagnostic services are provided by entities other than the NPPO laboratories in most countries. However, documented procedures for sampling, sample delivery, intermediate

storage and disposal are not used in most countries; largely laboratory systems do not ensure traceability of samples. Verification of performance or results from NPPO laboratories with other diagnostic laboratories (inside or outside the country) is carried out but only in some of the countries. However, the majority of laboratories hardly use virtual diagnostics. Hence accuracy of information of pest data, which is based on results from some of these laboratories, could compromise usefulness of surveillance results. The situation is aggravated in most countries by the apparent lack of budgetary provision for surveillance as an NPPO activity.

G. Resources

The scenarios presented by countries and regions concerning resources is extremely varied. The total annual investment made by NPPOs to conduct pest surveillance is highly variable among countries (Figure 5) as is the investment by other public or private organizations, agencies or departments (non-APPO) to conduct pest surveillance in most countries (Figure 6).

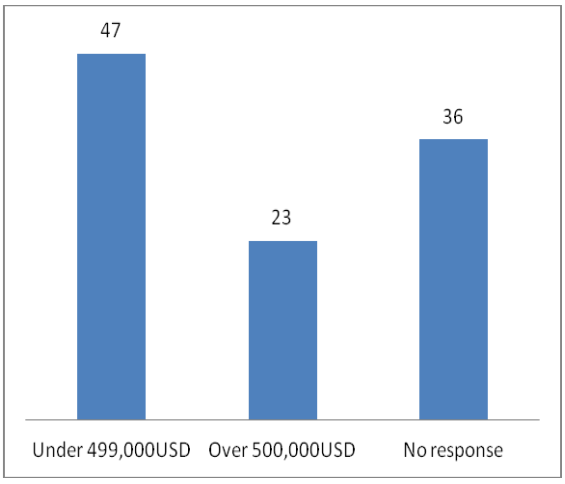


Figure 5: Responses to the question 'what is the total annual investment currently being made by the NPPO to conduct Pest Surveillance (US$)?

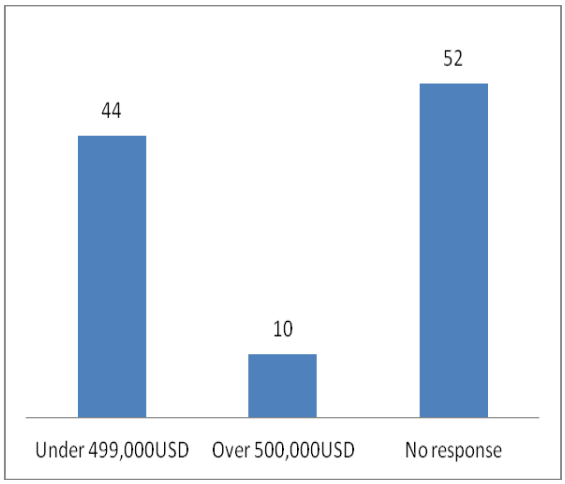


Figure 6: 'Country estimates of the total annual investment (US$) being made by other public or private organizations, agencies or departments (non-APPO) to conduct pest surveillance in the country'?

Most countries did not provide any answer to the question concerning the contribution of industry (private sector) to surveillance as a percentage of the total NPPO pest surveillance budget, as was the case also for the question on percentage of the NPPO budget allocated to cover salaries of staff involved in the pest surveillance programme. Most countries rated the sufficiency of other resources (vehicles, traps, lures, samplers, GPS, etc.) required to operate pest surveillance programmes as intermediate or lower and the current NPPO human resources capacity of pest surveillance programmes as average and below (Figures 7 and 8). In terms of qualifications and skills, most countries rated the current human resources capacity of their NPPOs pest surveillance programme as average and good (Figure 9) but rated the human

resources capability to carry out the activities according to the NPPOs requirements for pest surveillance as insufficient (Figure 10).

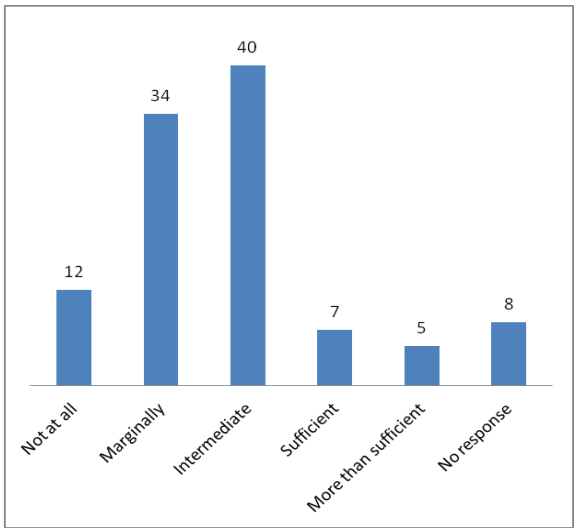


Figure 7: Country rating of the sufficiency of other resources (vehicles, traps, lures, samplers, GPS, etc.) required to operate the pest surveillance programme

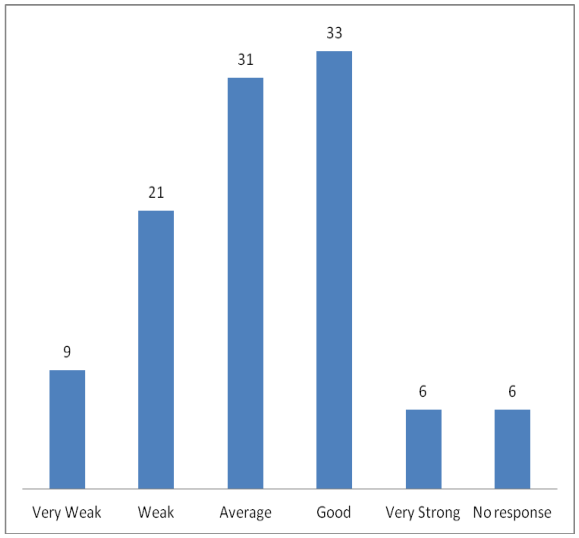


Figure 8: Country rating of the current pest surveillance programme of NPPOs in terms of human resources capacity with regard to qualifications and skills

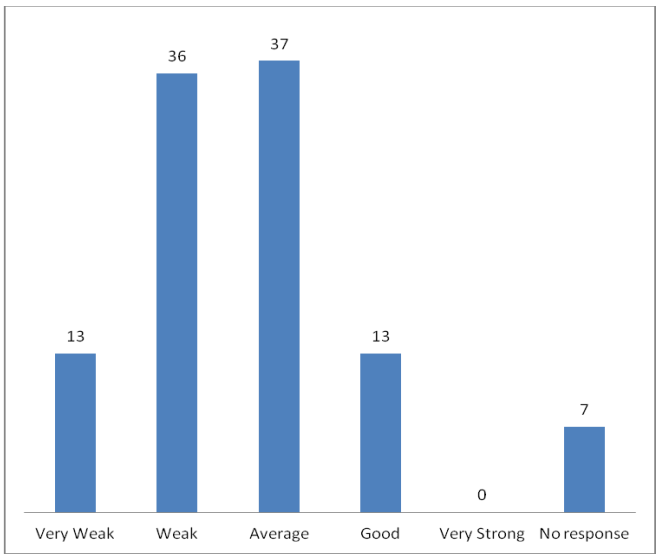


Figure 9: Country rating of the current pest surveillance programmes of NPPOs with regard to human resources capacity in terms of numbers

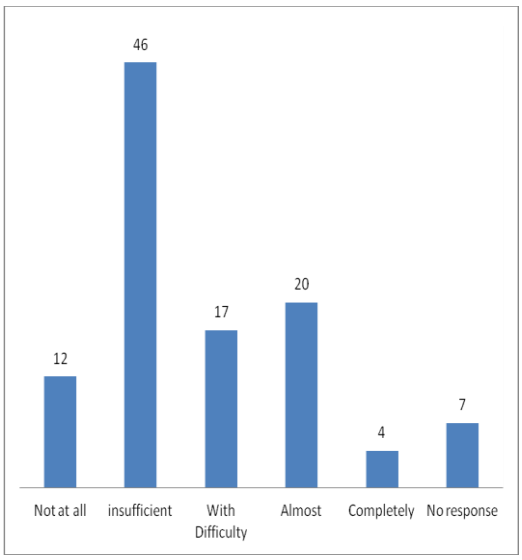


Figure 10. Responses to the question 'Are those human resources sufficient to carry out the activities according to the NPPO requirements for pest surveillance?

In many countries the proportion of the staff assigned to carry out pest surveillance that were specifically trained to do so is variable (Figure 11). Countries mostly indicating staff training either at least once a year or no programmed training (Figure 12).

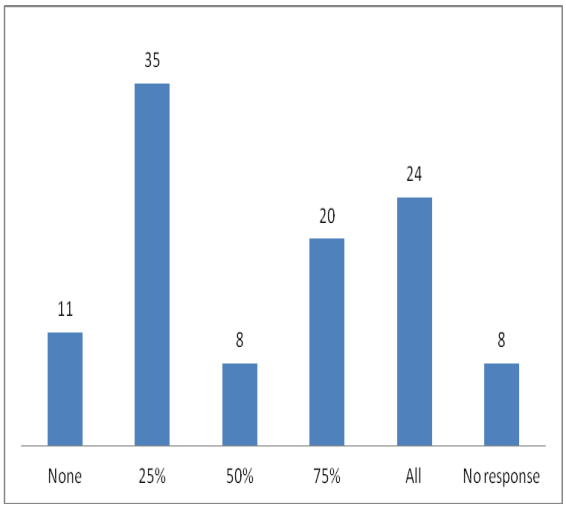


Figure 11: Responses to the question 'What proportion of the staff is assigned to carry out pest surveillance who have been specifically trained to do so?

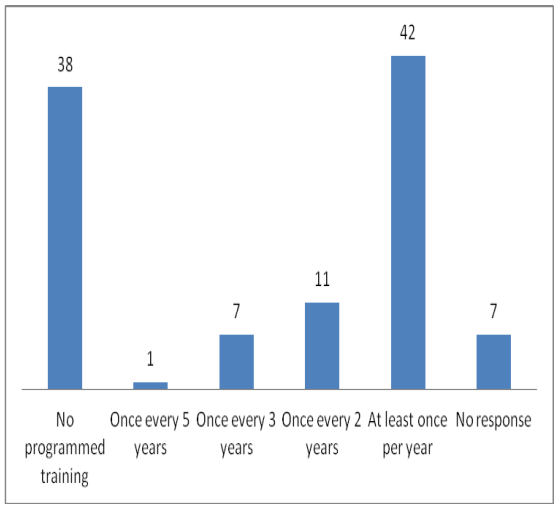


Figure 12: Responses to the question 'How frequent are training programmes for staff involved in pest surveillance?

In the majority of countries the cost of any specific survey is wholly or largely covered by governments with hardly any private sector contribution (Figure 13).

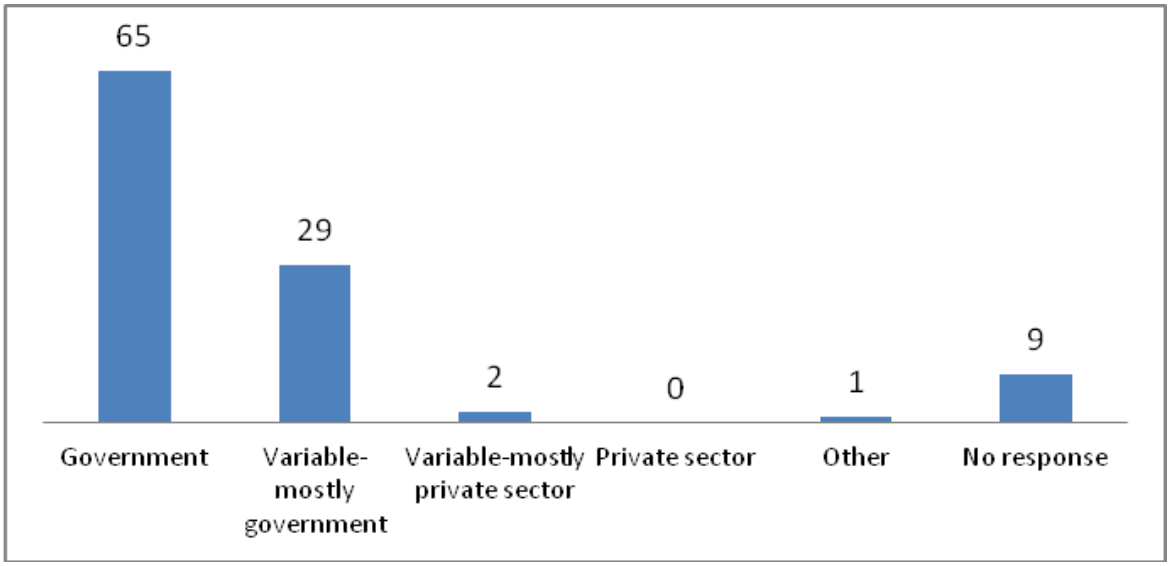


Figure 13: Responses to the question 'Who pays for the specific surveys to be conducted?

In most countries, pest surveillance is under-funded and inadequately resourced in terms of personnel, and equipment. Under-funding is apparent both within the NPPO budgeting process as well as the lack of support from other public and private agencies, leaving the government as the main sponsor of surveillance activities in the majority of countries. There is, however, a contradiction in the scenarios presented by countries indicating that human resource capacity, in terms of qualification, is not limiting for surveillance work yet inadequacy in number of experts hinders countries from carrying out surveillance according to NPPO requirements.

Despite the highly varying scenario presented by countries on the proportion of the specifically-trained staff assigned to carry out pest surveillance, and many countries indicate that their staff are trained at least once a year, an almost similar number of countries indicate that they do not have programmed training for staff involved in surveillance work.

Conclusion

Overall, country feedback generally indicates an uncoordinated approach to surveillance, despite the existence of organizational structures, documented mandates and strategic plans for surveillance. This is occasioned, in part, by the existence in many countries of more than one organization being responsible for pest surveillance but with no clear framework for formal liaison with NPPOs on surveillance results. Inadequate resource allocation and lack of appropriate technical resources for surveillance good practice is a common feature in many of the countries. The situation is aggravated in most countries by policies, laws and regulations that are not aligned with contemporary global phytosanitary requirements and, therefore, not explicit on essential actions to support surveillance.

REGIONAL ANALYSIS

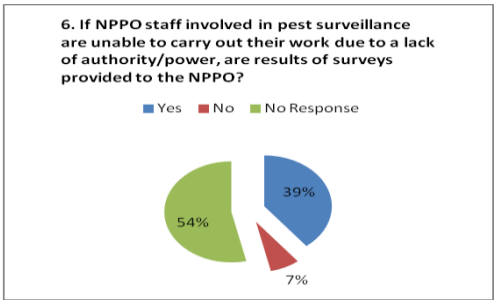
Africa: policy and legislative environment

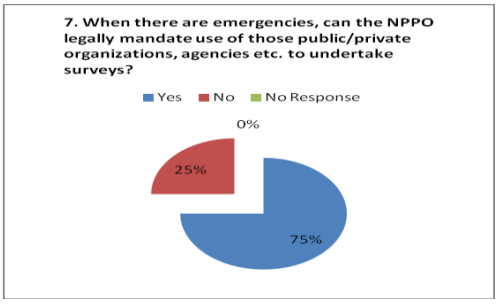
Strengths and opportunities

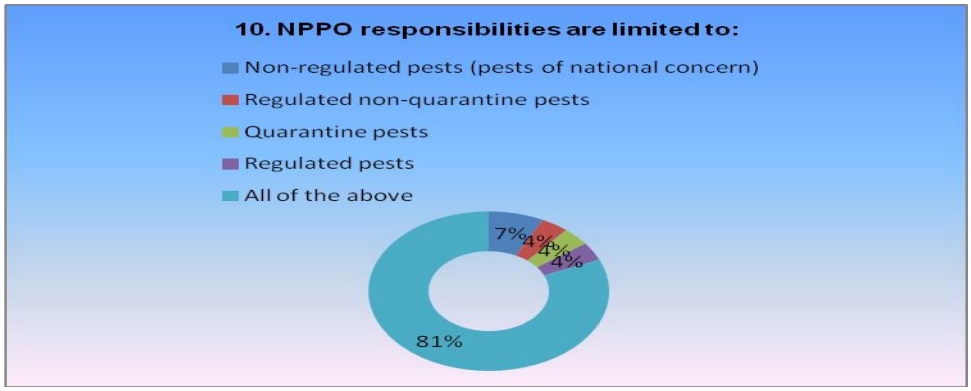
- 100 percent of respondents indicated that their NPPOs are primarily responsible for pest surveillance
- 79 percent of respondents indicated that 'other' public or private organizations, agencies or departments are mandated to perform pest surveillance
- 76 percent of respondents indicated that the powers/authority of NPPO staff involved in pest surveillance is sufficient for them to carry out their work

Challenges

- 46 percent of NPPOs do not conduct pest surveillance in a coordinated manner with 'other' public/private organizations
- 46 percent of respondents indicated that there are no written documents establishing the mandates, functions and responsibilities of public/private organizations for the conduct of pest surveillance
- 68 percent of respondents indicated that their pest surveillance service or programme does not have a strategic and operational plan in place







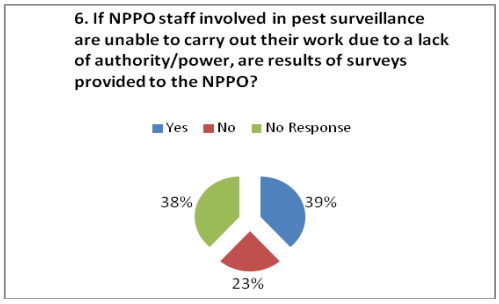
Asia: policy and legislative environment

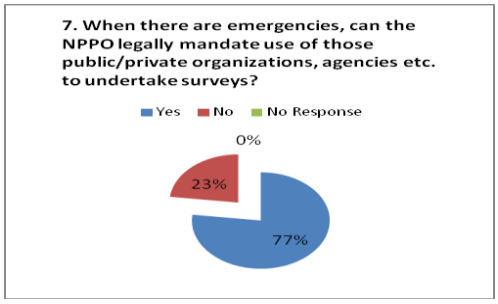
Strengths and opportunities

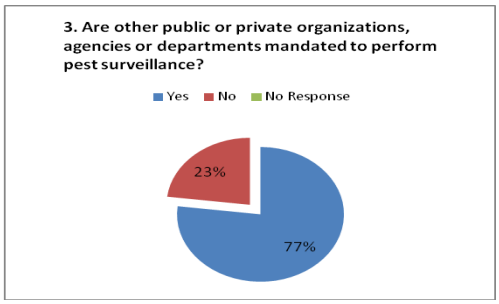
- 100 percent of respondents indicated that their NPPOs are primarily responsible for pest surveillance
- 85 percent of respondents noted coordination between NPPOs and other public/private institutions involved in pest surveillance
- 85 percent of respondents indicated that written documents exist establishing the mandates, functions and responsibilities of public/private organizations conducting pest surveillance

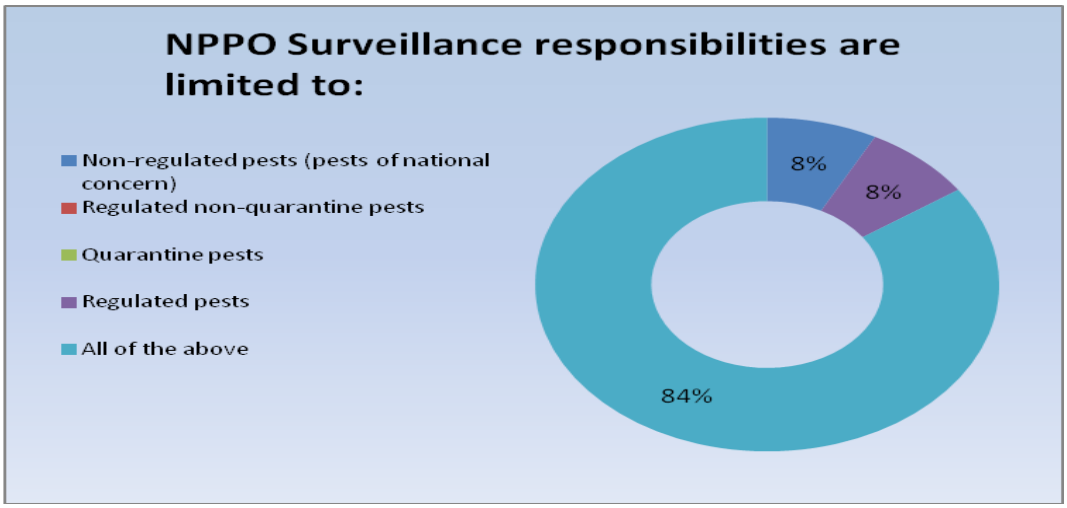
Challenges

- 31 percent of respondents indicated that their pest surveillance service or programme does not have a strategic and operational plan in place









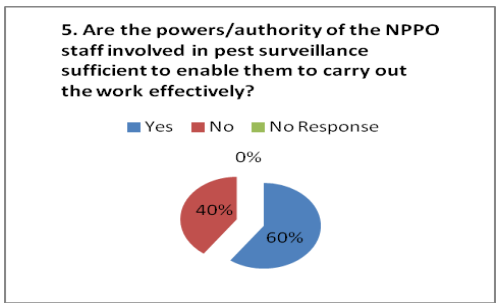
Caribbean: policy and legislative environment

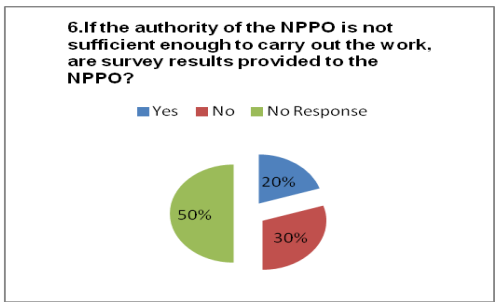
Strengths and opportunities

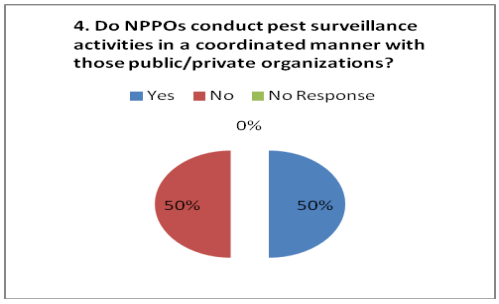
- 80 percent of respondents indicated that their NPPOs are primarily responsible for pest surveillance

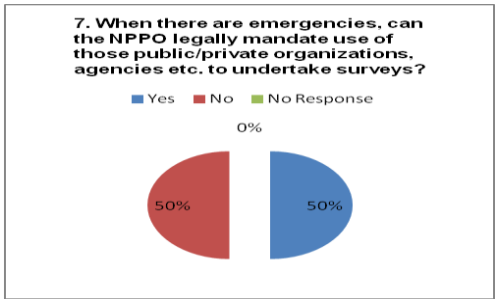
Challenges

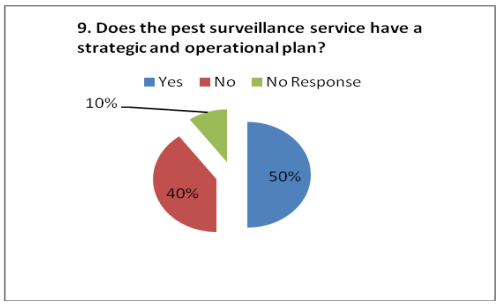
- 60 percent of respondents indicated that 'other' private organizations, institutions, agencies or departments are **not** legally mandated or otherwise to perform pest surveillance
- 80 percent of respondents indicated that there are no written documents establishing the mandates, functions and responsibilities of public/private organizations for the conduction of pest surveillance

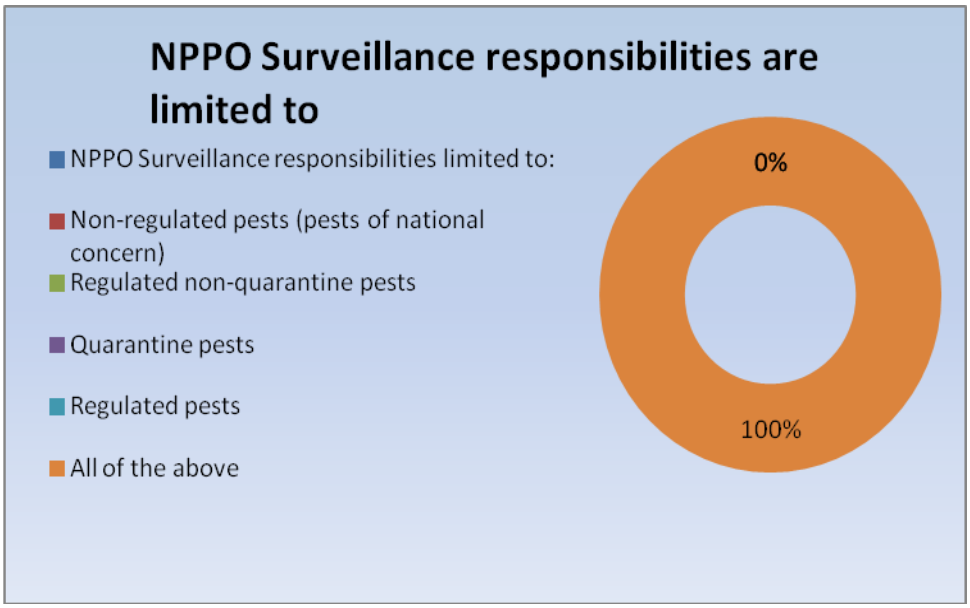












Eastern Europe and Central Asia: policy and legislative environment

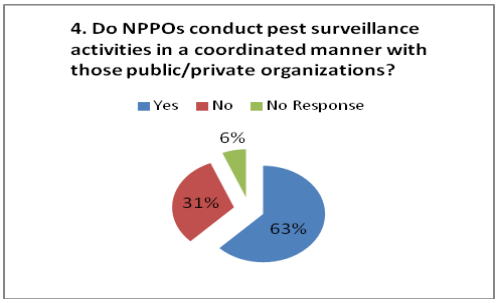
Strengths and opportunities

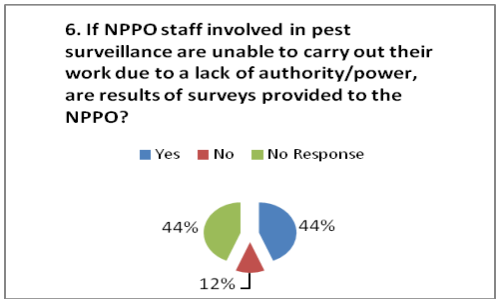
- 100 percent of respondents indicated that their NPPOs are primarily responsible for pest surveillance
- 81 percent of respondents indicated that their pest surveillance service or programme has no strategic or operational plan

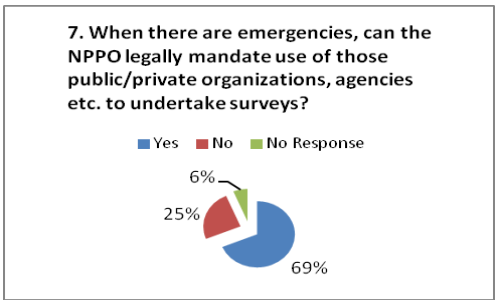
- 88 percent of respondents indicated that the powers/authority of NPPO staff involved in pest surveillance is sufficient for them to carry out their work

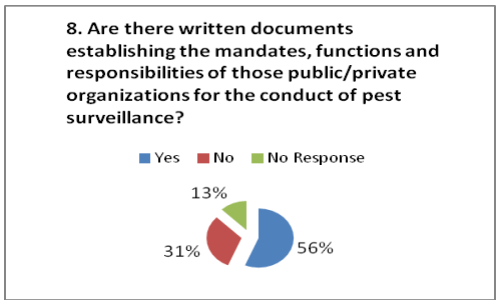
Challenges

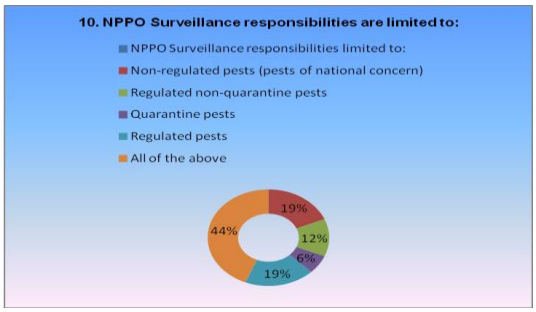
- 63 percent of respondents indicated that 'other' private organizations, institutions, agencies or departments are mandated to perform pest surveillance











Latin America: policy and legislative environment

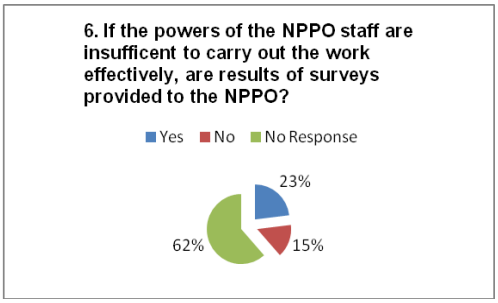
Strengths and opportunities

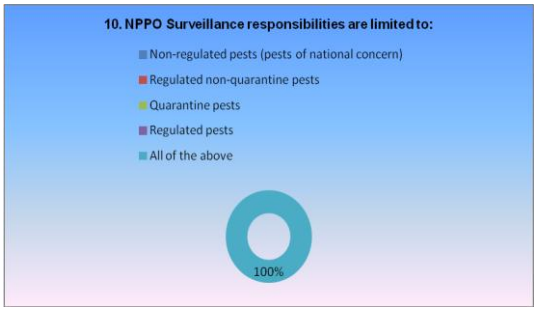
- 100 percent of respondents indicated that their NPPOs are primarily responsible for pest surveillance
- 92 percent of respondents indicated that their NPPOs conduct pest surveillance in coordination with public or private organizations, agencies or departments

- 85 percent of respondents indicated that the powers/authority of NPPO staff involved with pest surveillance work was sufficient for them to carry out their work
- 85 percent of respondents indicated that their pest surveillance service or programme has a strategic and operational plan in place

Challenges

- 46 percent of respondents indicated that 'other' private organizations, institutions, agencies or departments are not legally mandated or otherwise to perform pest surveillance
- 38 percent of respondents indicated that during emergencies NPPOs **cannot** legally mandate the use of public/private organizations, institutions or departments to undertake surveys
- 38 percent of respondents indicated that there are no written documents establishing the mandates, functions and responsibilities of public/private organizations for the conduct of pest surveillance





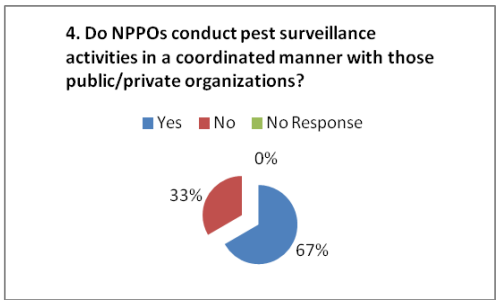
Near East: policy and legislative environment

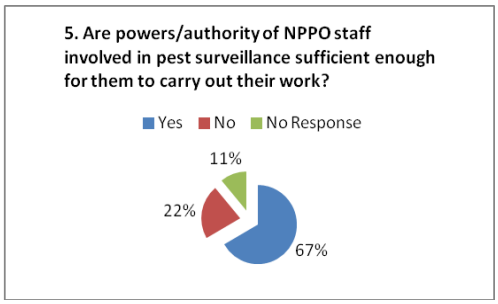
Strengths and opportunities

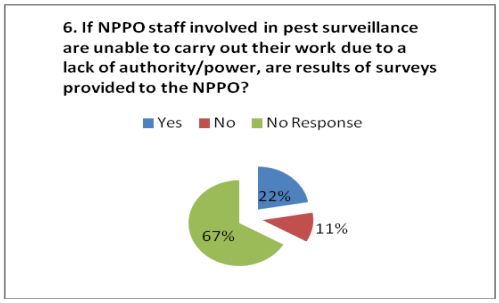
- 100 percent of respondents indicated that their NPPOs are primarily responsible for pest surveillance
- 78 percent of respondents indicated that 'other' private organizations, institutions, agencies or departments are mandated to perform pest surveillance
- 89 percent of respondents indicated that their pest surveillance service or programme does not have a strategic and operational plan in place

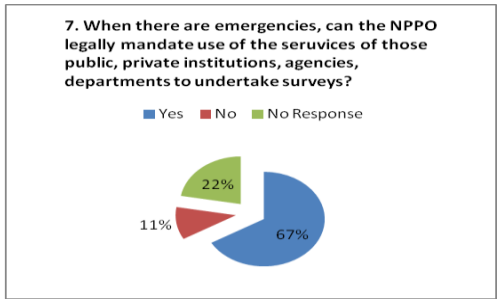
Challenges

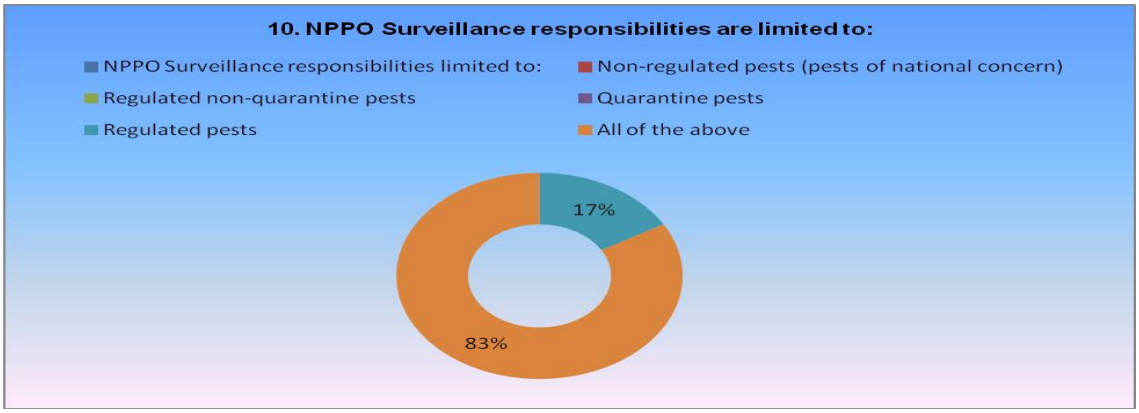
- 44 percent of respondents indicated that there are no written documents establishing the functions, mandates and responsibilities to conduct pest surveillance







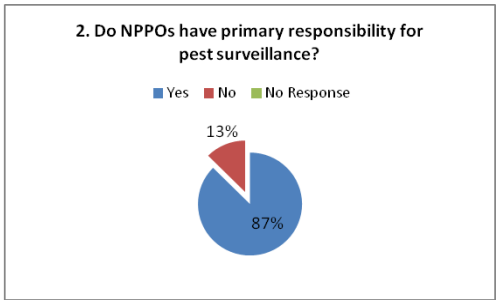


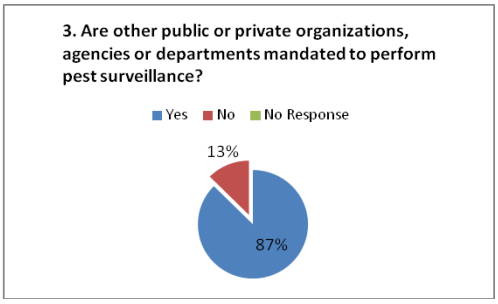


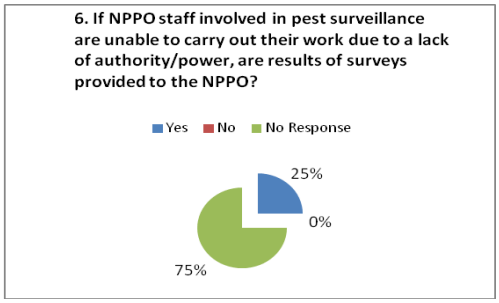
Southwest Pacific: policy and legislative environment

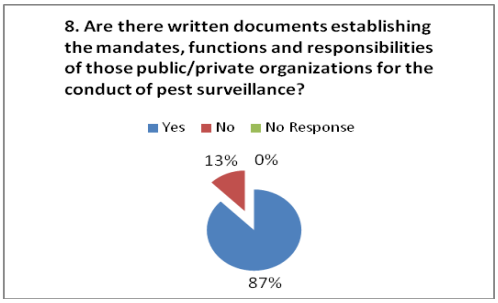
Strengths and opportunities

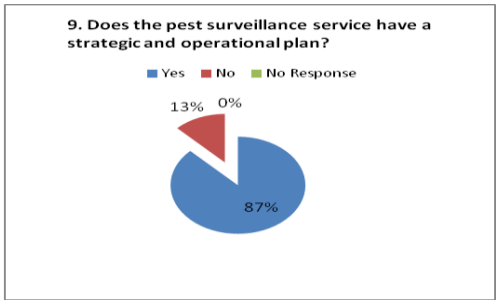
- 100 percent of respondents noted coordination between NPPOs and other public/private institutions involved in pest surveillance
- 100 percent of respondents indicated that the powers/authority of NPPO staff involved with pest surveillance work was sufficient for them to carry out their work
- 100 percent of respondents indicated that during emergencies NPPOs can legally mandate the use of public/private organizations, institutions or departments to undertake surveys

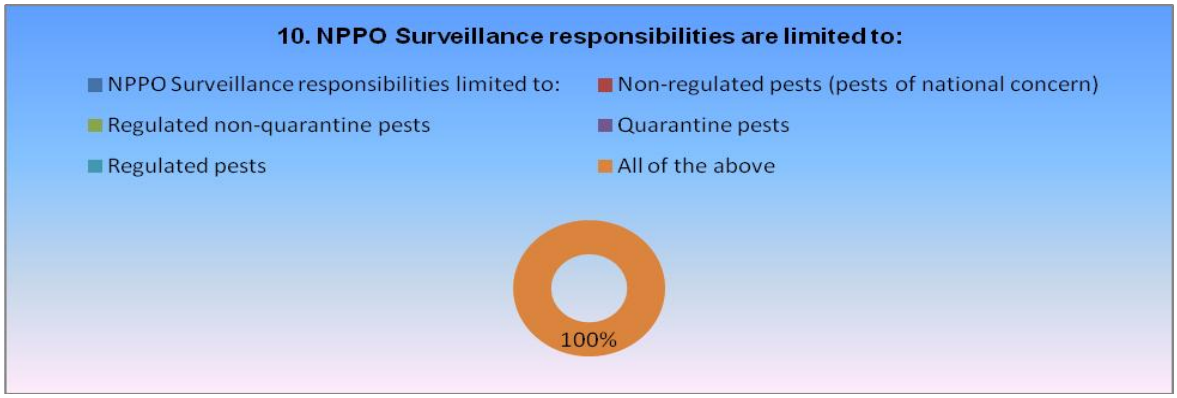

2. Do NPPOs have primary responsibility for pest surveillance?
Yes
No
No Response
13%
87%


3. Are other public or private organizations, agencies or departments mandated to perform pest surveillance?
Yes
No
No Response
13%
87%


6. If NPPO staff involved in pest surveillance are unable to carry out their work due to a lack of authority/power, are results of surveys provided to the NPPO?
Yes
No
No Response
25%
0%
75%


8. Are there written documents establishing the mandates, functions and responsibilities of those public/private organizations for the conduct of pest surveillance?
Yes
No
No Response
13%
0%
87%


9. Does the pest surveillance service have a strategic and operational plan?
Yes
No
No Response
13%
0%
87%


10. NPPO Surveillance responsibilities are limited to:
NPPO Surveillance responsibilities limited to:
Non-regulated pests (pests of national concern)
Regulated non-quarantine pests
Quarantine pests
Regulated pests
All of the above
100%

ORGANIZATIONAL STRUCTURE, COMPENTENCIES AND CULTURE

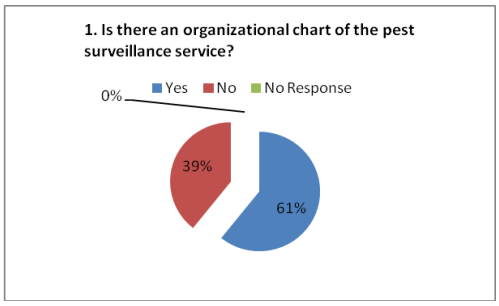
Africa: organizational structure, competencies and culture

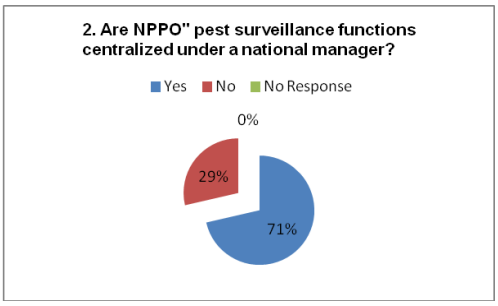
Strengths and opportunities:

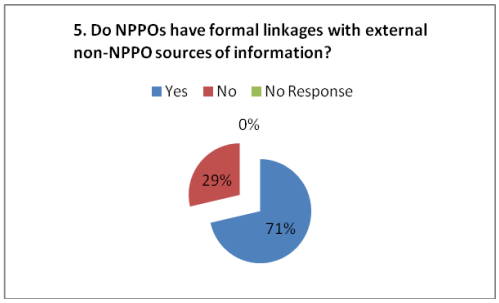
- 86 percent or respondents reported that during an emergency, stakeholders are included in the emergency planning team
- 75 percent of respondents indicate that NPPOs are engaging relevant stakeholders to support and improve the quality of pest surveillance services

Challenges:

- 86 percent of respondents indicated that their NPPOs do not have well-developed and compatible data systems to collect, store and report pest surveillance information
- 82 percent of respondents in the region indicated that pest surveillance programmes/services have no procedures in place to review their performance



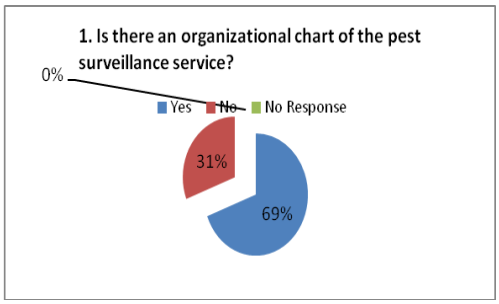


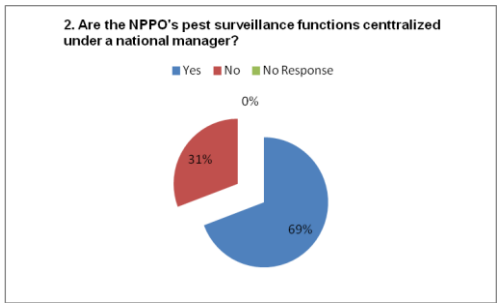


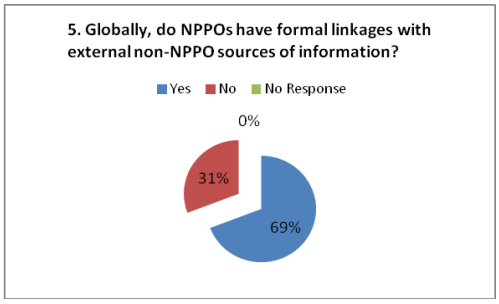
Asia: organizational structure, competencies and culture

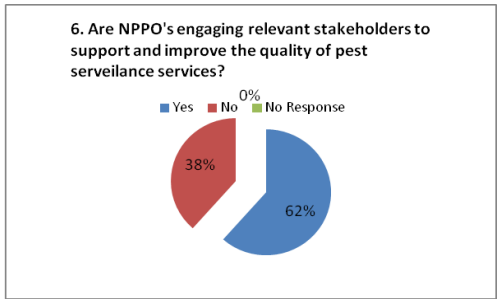
Challenges:

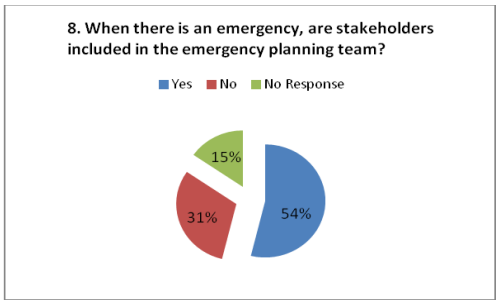
- 46 percent of respondents indicated that pest surveillance programmes or services do not have procedures in place to review their performance
- 46 percent of respondents indicated that NPPO pest surveillance do not have well-developed and compatible data systems to collect, report and store pest surveillance information











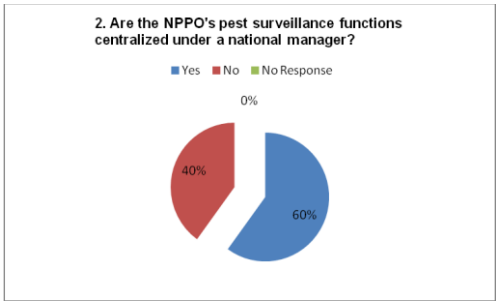
Caribbean region: organizational structure, competencies and culture

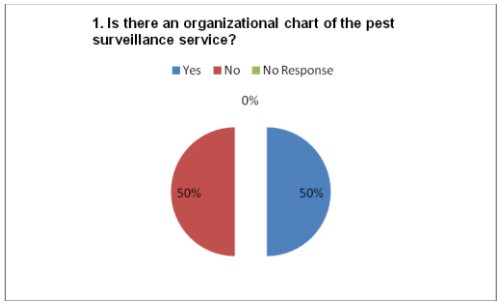
Strengths and opportunities:

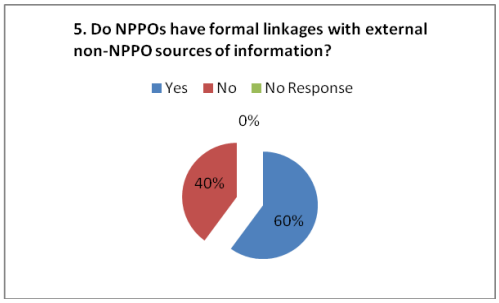
- 80 percent of respondents indicated that the NPPOs are engaging relevant stakeholders to support and improve the quality of pest surveillance services
- 100 percent of respondents indicated that during an emergency stakeholders are included in the emergency planning team

Challenges:

- 70 percent of respondents indicated that NPPO pest surveillance programmes or services do not have well-developed and compatible data systems to collect, store and report pest surveillance information
- 70 percent of respondents indicated that NPPO pest surveillance services or programmes do not have procedures in place to review their performance





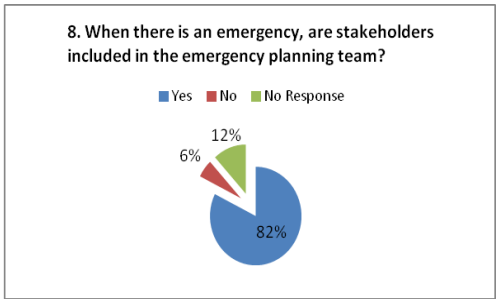


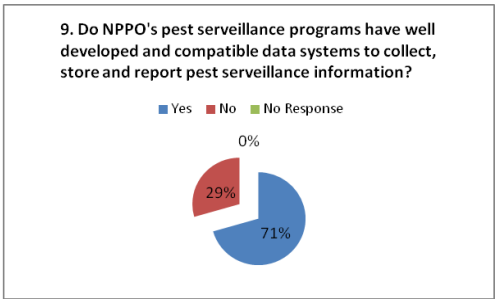
Eastern Europe and Central Asia: organizational structure, competencies and culture

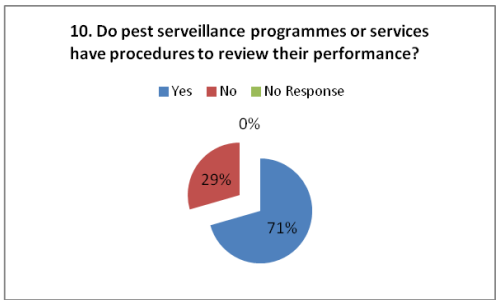
Strengths and opportunities:

- 94 percent of respondents reported that there is an organizational chart for the pest surveillance service and that during an emergency, stakeholders are included in the emergency planning team
- 94 percent of respondents indicated that the NPPO functions are centralized under a national manager

- 94 percent of respondents indicated that their NPPOs have formal linkages with external non-NPPO sources of information
- 88 percent of respondents reported that NPPO are engaging relevant stakeholders to support and improve the quality of pest surveillance services



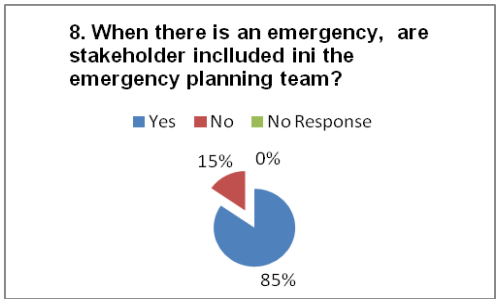


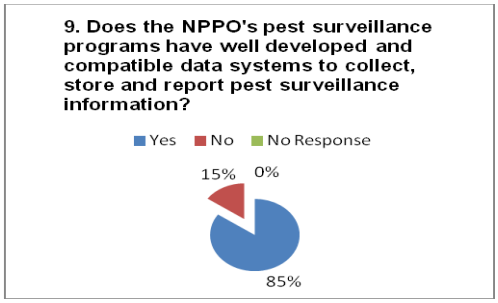


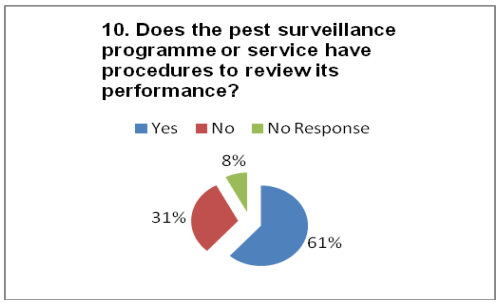
Latin American: organizational structure, competencies and culture

Strengths and opportunities:

- 92 percent of respondents indicated that the NPPO functions are centralized under a national manager
- 92 percent of respondents indicated that there is an organizational chart of the pest surveillance service
- 92 percent of respondents indicated that their NPPO have formal linkages with external non-NPPO sources of information
- 92 percent of respondents indicated that their NPPO are engaging relevant stakeholders to support and improve the quality of pest surveillance services







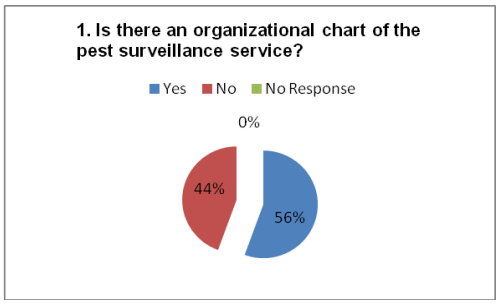
Near East: organizational structure, competencies and culture

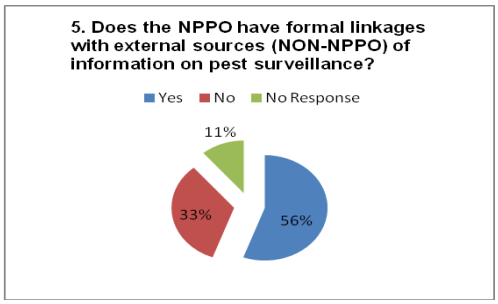
Strengths and opportunities:

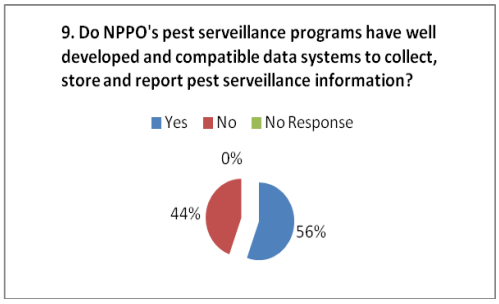
- 89 percent of respondents indicated that the NPPO functions are centralized under a national manager
- 78 percent of respondents indicated that when there is an emergency stakeholders are included in the emergency planning team

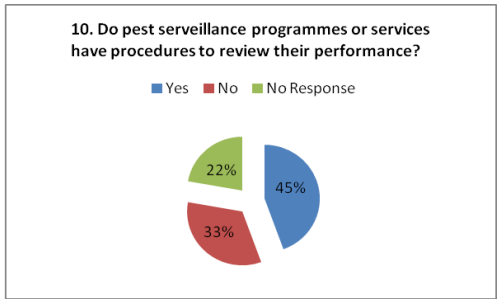
Challenges:

- 45 percent of respondents indicated that when there is an emergency stakeholders are **not** included in the emergency planning team





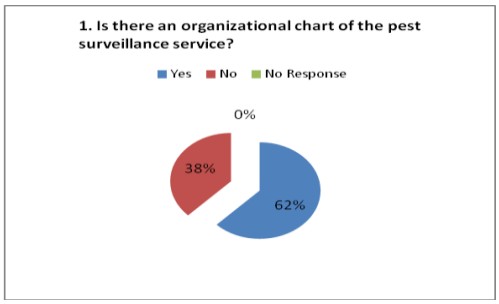


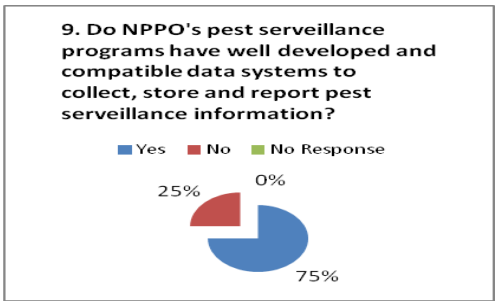


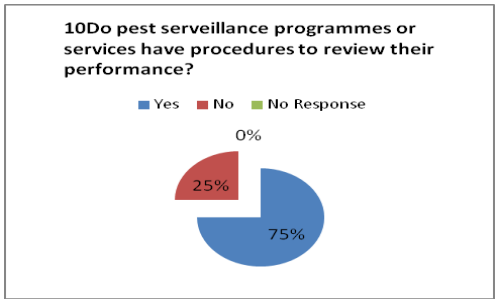
Southwest Pacific: organizational structure, competencies and culture

Strengths and opportunities:

- 87 percent of respondents indicated that the NPPO functions are centralized under a national manager
- 89 percent of respondents indicated that their NPPO have formal linkages with external non-NPPO sources of information
- 100 percent of respondents indicated that when there is an emergency stakeholders are included in the emergency planning team
- 89 percent of respondents indicated that their NPPO are engaging relevant stakeholders to support and improve the quality of pest surveillance services







DOCUMENTED PROCEDURES

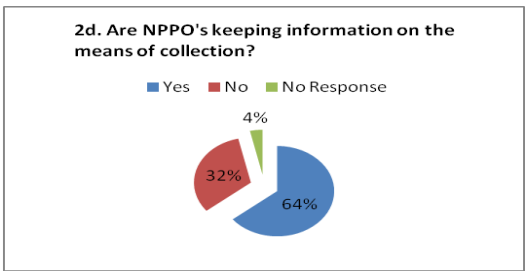
Africa: documented procedures

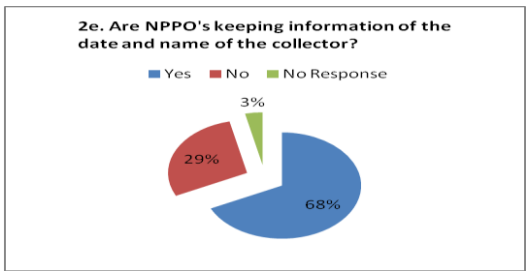
Strengths and opportunities:

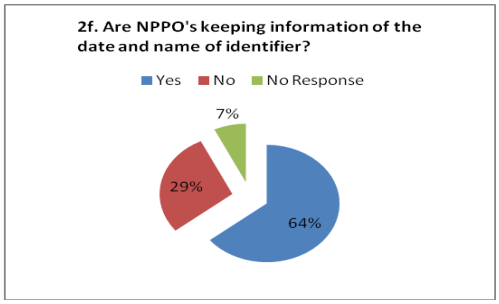
- 86 percent of respondents indicated that their NPPOs keep information on the scientific name of the pest
- 82 percent of respondents indicated that their NPPOs keep information on the scientific name of the host
- 83 percent of respondents indicated NPPO keep information on the plant part affected
- 79 percent of respondents indicated that NPPO keep information on the geographical location of pest

Challenges:

- 59 percent of respondents indicated that their NPPOs are not using computerized retrieval systems for surveillance information
- 50 percent of respondents indicated that they are **not** keeping information on the date and name of the verifier
- 45 percent of respondents reported that GIS coordinates are **not** being used to specify the location of pests detected during pest surveys
- 90 percent of respondents indicated that their NPPO do **not** have an operational manual for general pest surveillance







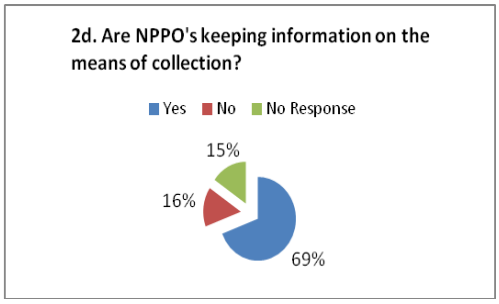
Asia: documented procedures

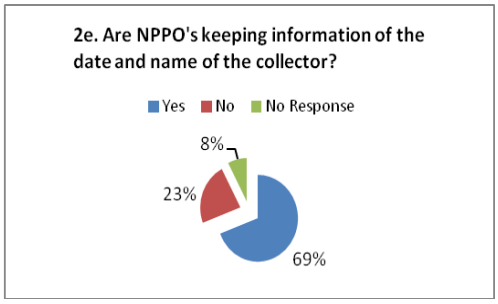
Strengths and opportunities:

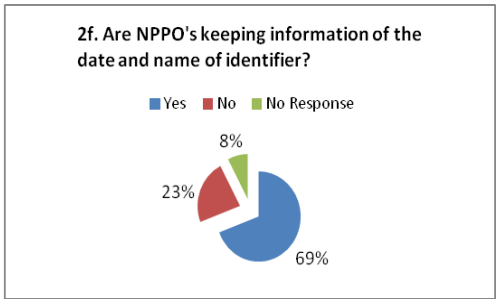
- 84 percent of respondents indicated that their NPPOs keep information on the scientific name of the pest
- 77 percent of respondents indicated that their NPPOs keep information on the plant parts affected
- 77 percent of respondents indicated NPPOs keep information on the scientific name of the host

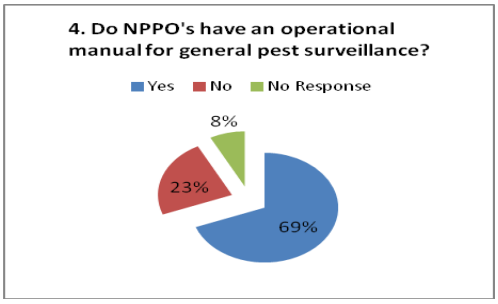
Challenges:

- 54 percent of respondents indicated that their NPPOs are **not** using computer retrieval systems for surveillance information
- 39 percent of respondents indicated NPPOs do not keep information of the date and name of the verifier
- 46 percent of respondents indicated that they do not use GIS coordinates to specify the location of pests detected









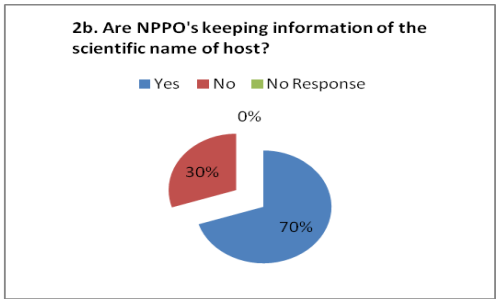
Caribbean: documented procedures

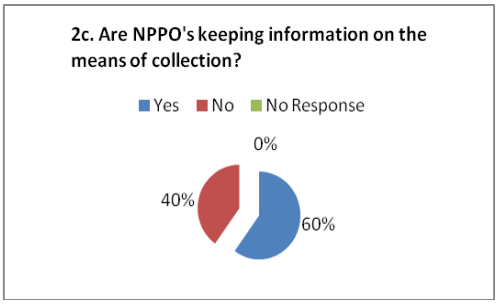
Strengths and opportunities:

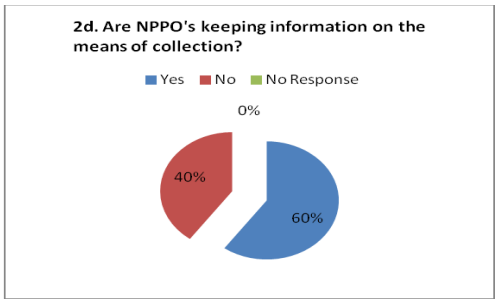
- 90 percent of respondents indicated that their NPPOs keep information on the scientific name of the pest
- 70 percent of respondents indicated NPPOs keep information on the geographical location
- 70 percent of respondents indicated that they use GIS coordinates to specify the location of pests detected

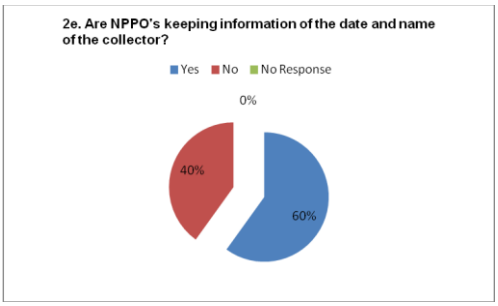
Challenges:

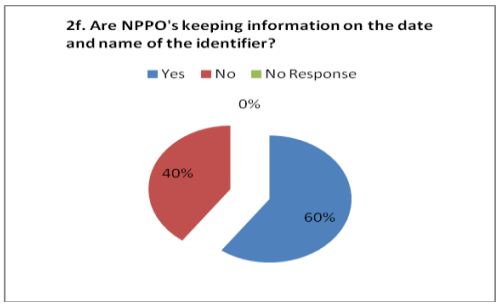
- 70 percent of respondents indicated that their NPPOs do not use computer retrieval systems for surveillance information
- 50 percent of respondents indicated NPPOs do not keep information on the date and name of the verifier
- 80 percent of respondents indicated that their NPPOs do not have an operational manual for general pest surveillance











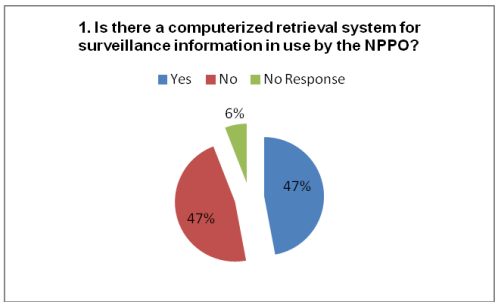
Eastern Europe and Central Asia: documented procedures

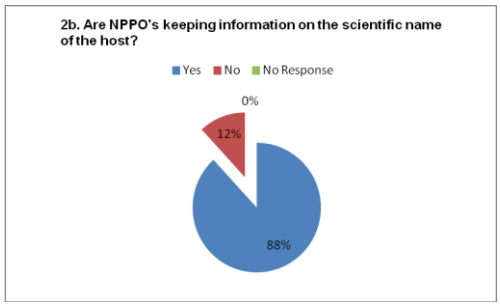
Strengths and opportunities:

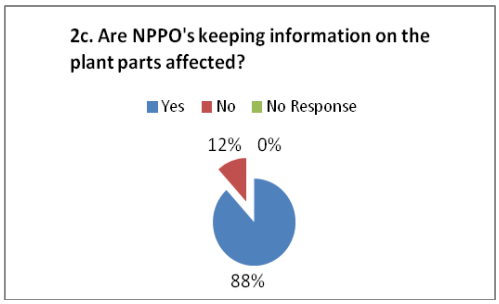
- 94 percent of respondents indicated that their NPPOs keep information on the scientific name of the pest
- 100 percent of respondents indicated that their NPPO keep information on the date and name of the identifier
- 94 percent of respondents indicated NPPO keep information on the date and name of the verifier
- 100 percent of respondents indicated that NPPO keep information on the geographical location of pest

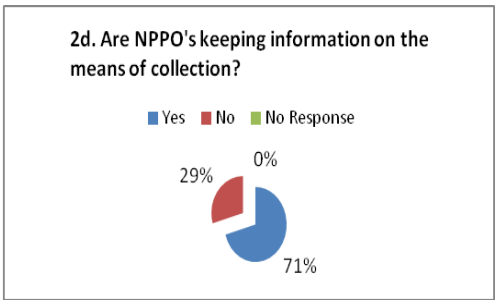
Challenges:

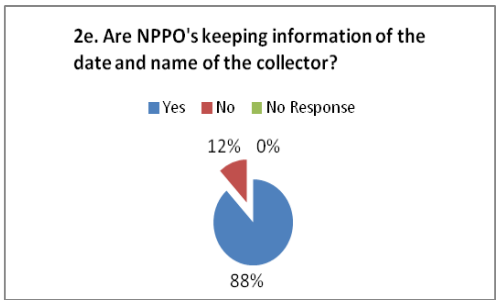
- 53 percent of respondents indicated that GIS coordinates are **not** being used to specify the location of pests detected











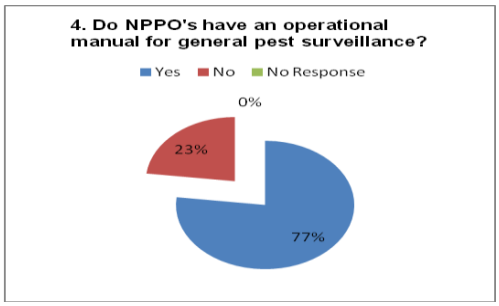
Latin America: documented procedures

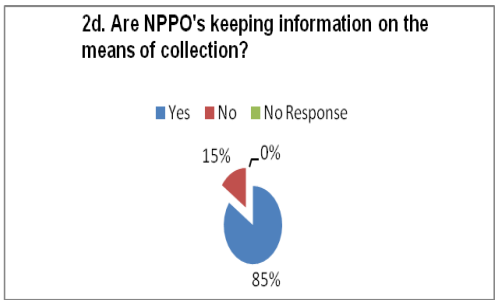
Strengths and opportunities:

- 100 percent of respondents indicated that their NPPOs keep information on the scientific name of the pest
- 92 percent of respondents indicated that their NPPOs keep information on the scientific name of the host
- 92 percent of respondents indicated that their NPPOs keep information on the date and name of the collector
- 100 percent of respondents indicated that their NPPOs keep information on the date and name of the identifier
- 92 percent of respondents indicated NPPOs keep information on the geographical location
- 100 percent of respondents indicated use of GIS coordinates to specify location of pests detected
- 92 percent of respondents indicated they keep information on the plant part affected

Challenges:

- 38 percent of respondents indicated NPPOs do not keep information on the date and name of the verifier





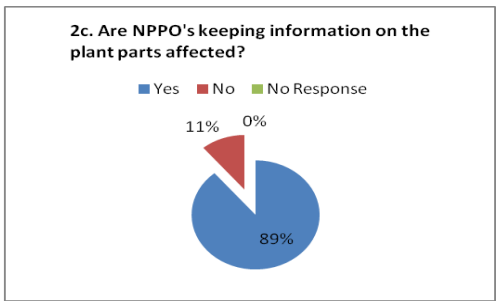
Near East: documented procedures

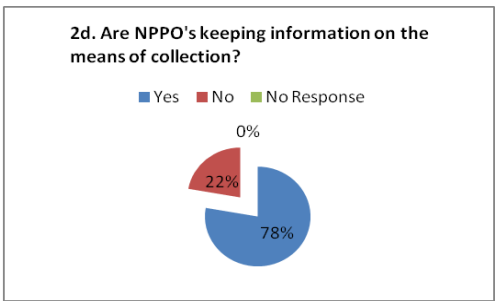
Strengths and opportunities:

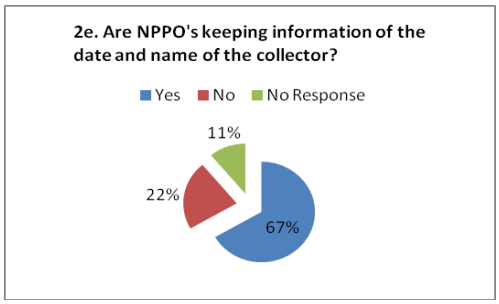
- 89 percent of respondents indicated that their NPPOs keep information on the scientific name of the pest
- 89 percent of respondents indicated that their NPPO keep information on the scientific name of the host
- 89 percent of respondents indicated NPPO keep information on the geographical location

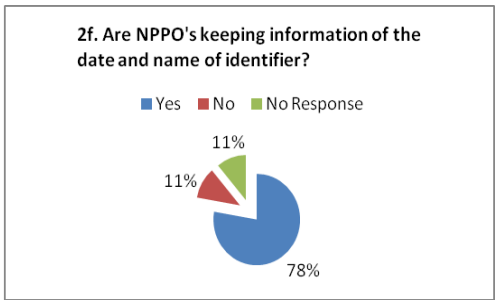
Challenges:

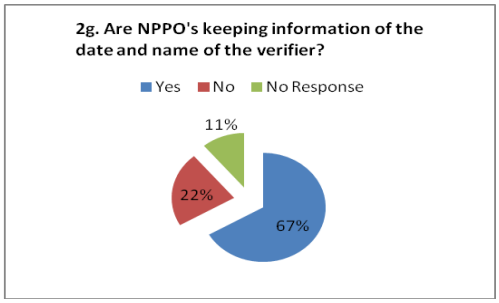
- 45 percent of respondents indicated that their NPPO have no operational manual on general pest management
- 56 percent of respondents indicated that their NPPOs do not use computer retrieval systems for surveillance information
- 56 percent of respondents indicated they do not use GIS coordinates to specify the location of pests detected











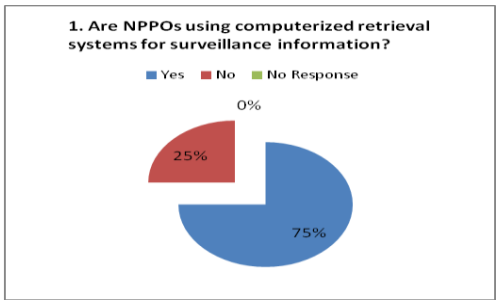
Southwest Pacific: documented procedures

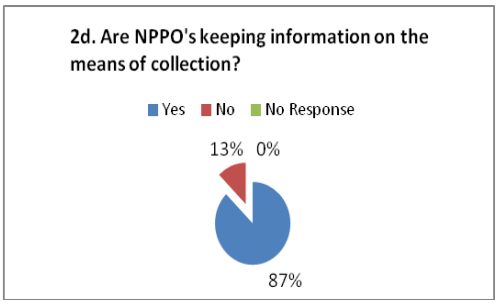
Strengths and opportunities:

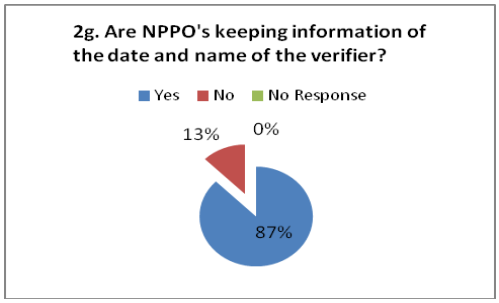
- 100 percent of respondents indicated that their NPPOs keep information on the scientific name of the pest
- 100 percent of respondents indicated that their NPPOs keep information on the scientific name of the host
- 100 percent of respondents indicated that their NPPOs keep information on the plant parts affected
- 100 percent of respondents indicated NPPOs keep information on the date and name of the collector
- 100 percent of respondents indicated NPPOs keep information on the date and name of the identifier
- 100 percent of respondents indicated NPPOs keep information on the geographical location

Challenges:

- 63 percent of respondents indicated that their NPPOs have no operational manual on general pest management
- 38 percent of respondents indicated they do not use GIS coordinates to specify the location of pests detected


1. Are NPPOs using computerized retrieval systems for surveillance information?
Yes
No
No Response
0%
25%
75%


2d. Are NPPO's keeping information on the means of collection?
Yes
No
No Response
13%
0%
87%

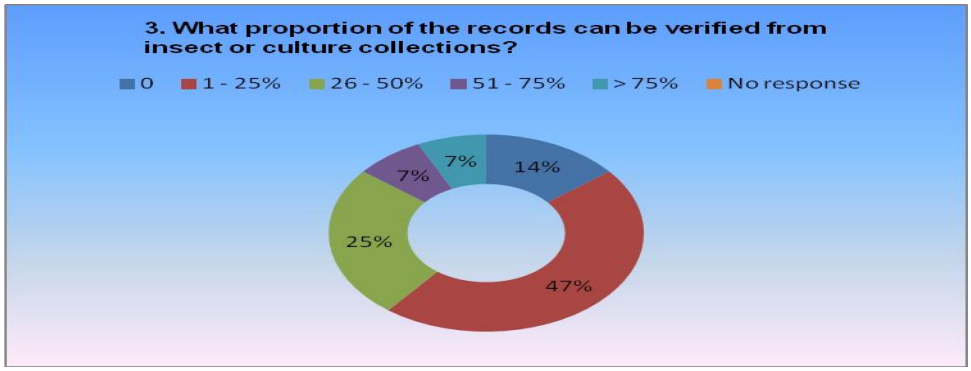

2g. Are NPPO's keeping information of the date and name of the verifier?
Yes
No
No Response
13%
0%
87%

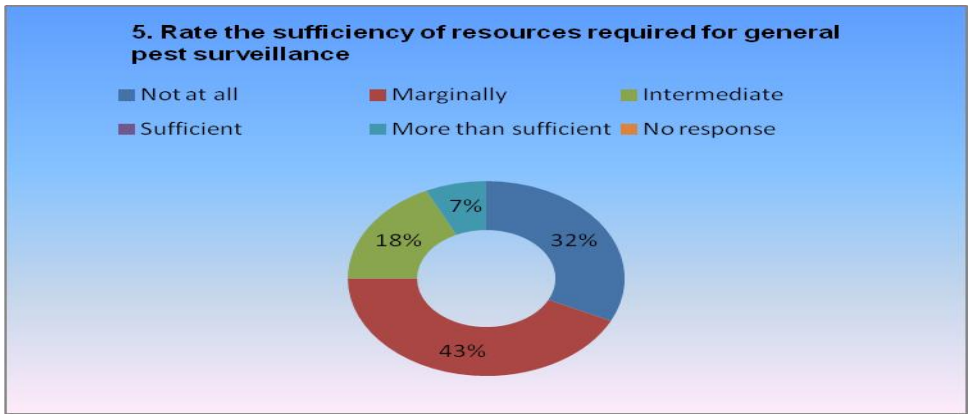
GENERAL SURVEILLANCE

Africa: general surveillance

Challenges:

- 57 percent of respondents indicated their countries have no national database of plant pest records
- 68 percent of respondents indicated that databases of plant pest records are not easily accessible by their NPPOs
- 39 percent of respondents indicated that there is no pest identification service for the public

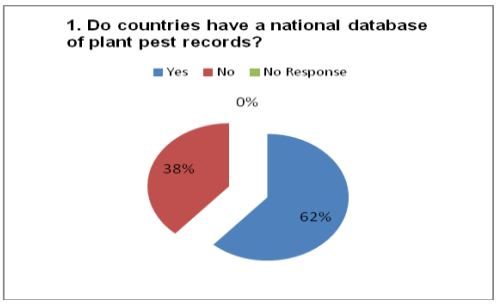


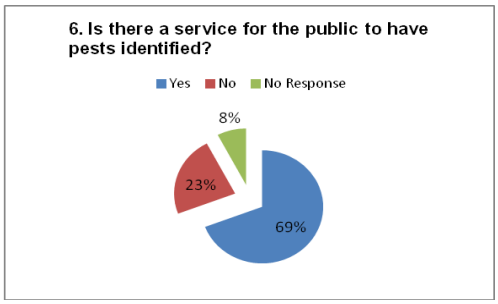


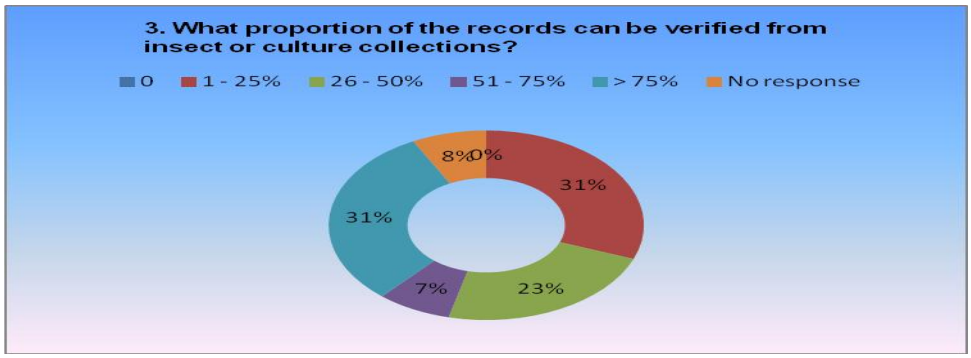
Asia: General surveillance

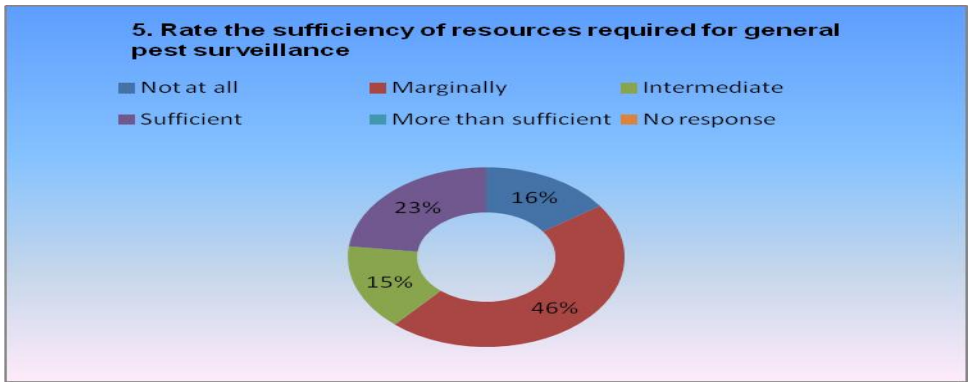
Challenges

- 38 percent of respondents indicated that NPPOs do not have easy access to databases of plant pest records









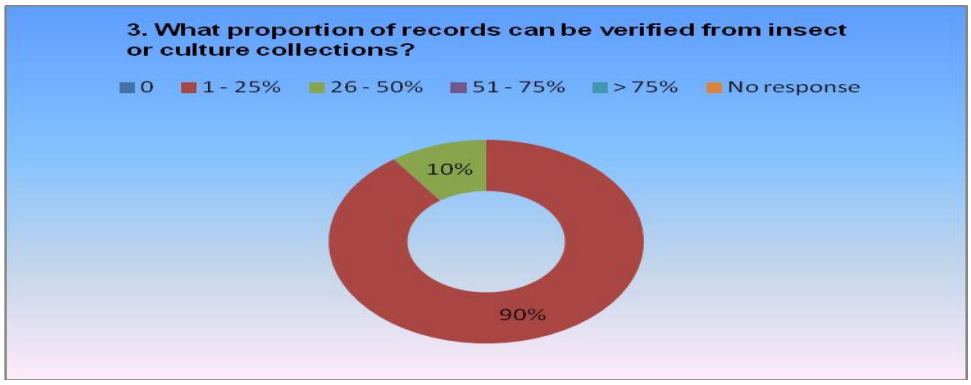
Caribbean: general surveillance

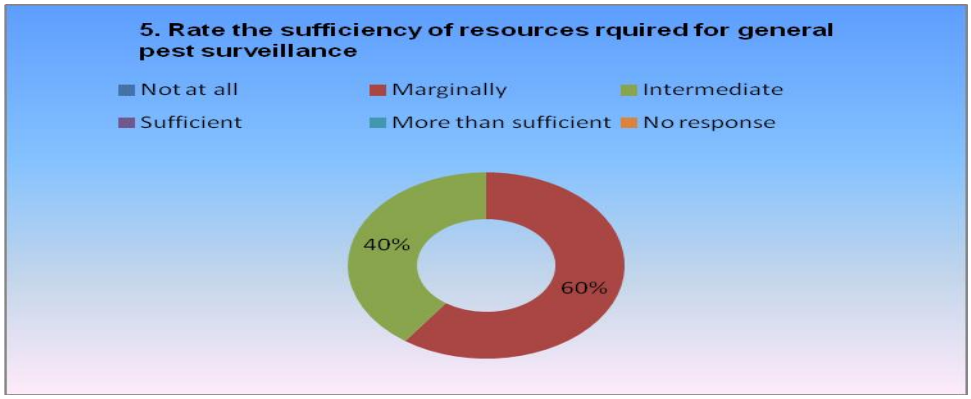
Strengths and opportunities

- 100 percent of respondents indicated there is a pest identification service for the public

Challenges

- 50 percent of respondents indicated that NPPOs do not have easy access to databases of plant pest records
- 60 percent of respondents indicated that countries do not have a national database of plant pest records

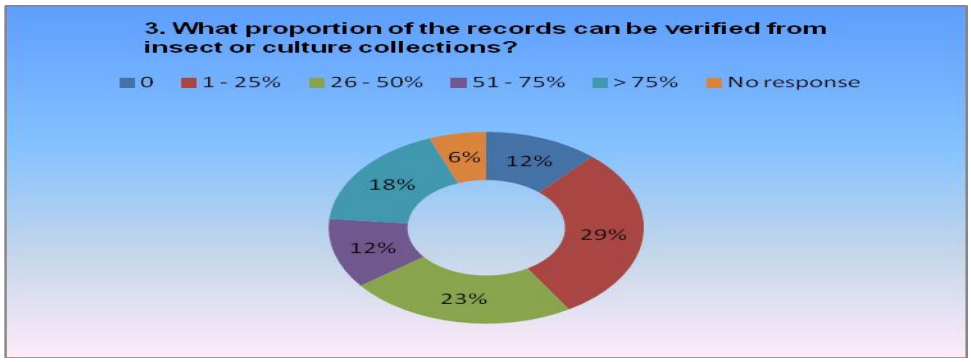


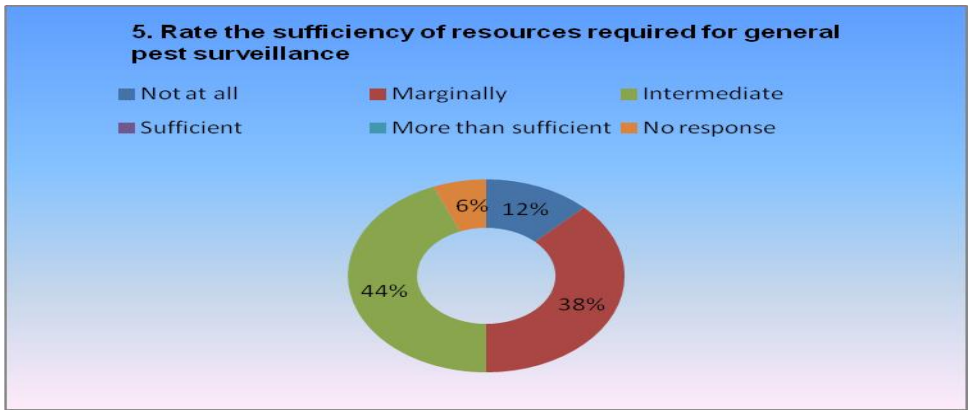


Eastern Europe and Central Asia: general surveillance

Strengths and opportunities

- 82 percent of respondents indicated there is a pest identification service for the public
- Challenges
- 53 percent of respondents indicated that NPPOs do not have easy access to databases of plant pest records
- 41 percent of respondents indicated countries do not have a national database of plant pest records

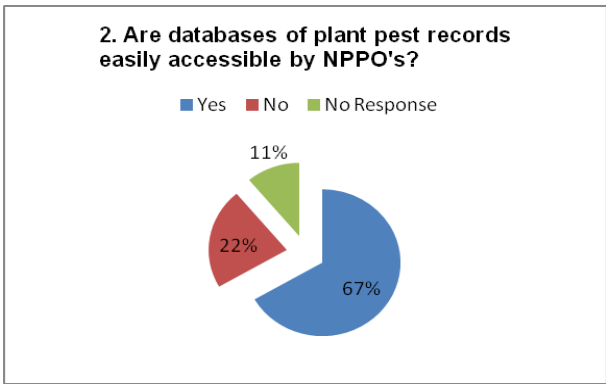


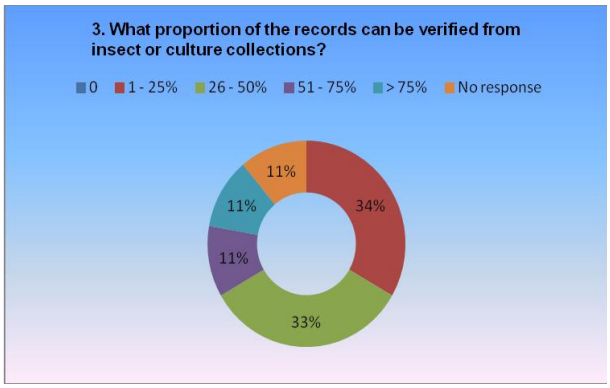


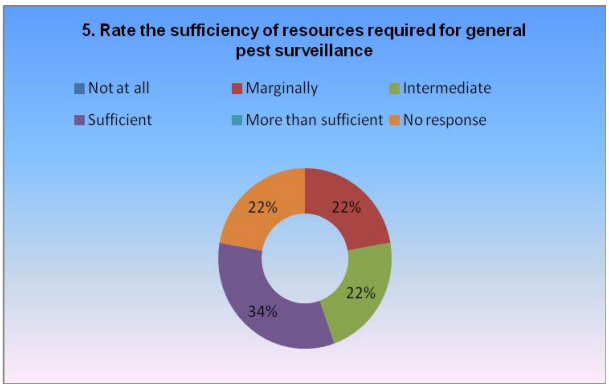
Near East: general surveillance

Strengths and opportunities

- 78 percent of respondents indicated that countries have a national database of plant pest records
- 89 percent of respondents indicated that there is a pest identification service for the public



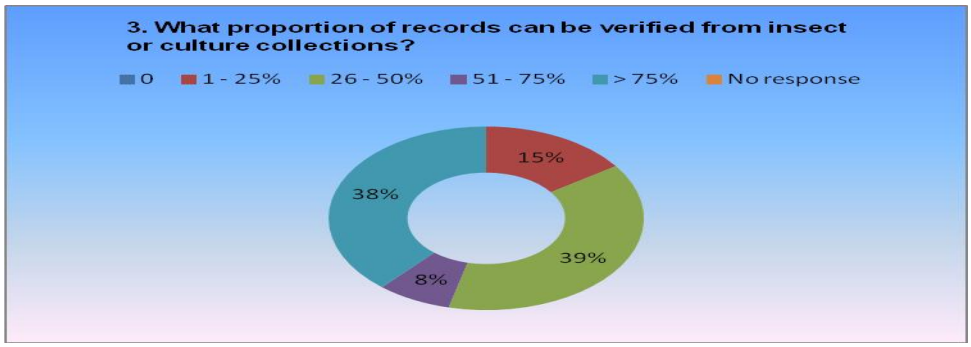


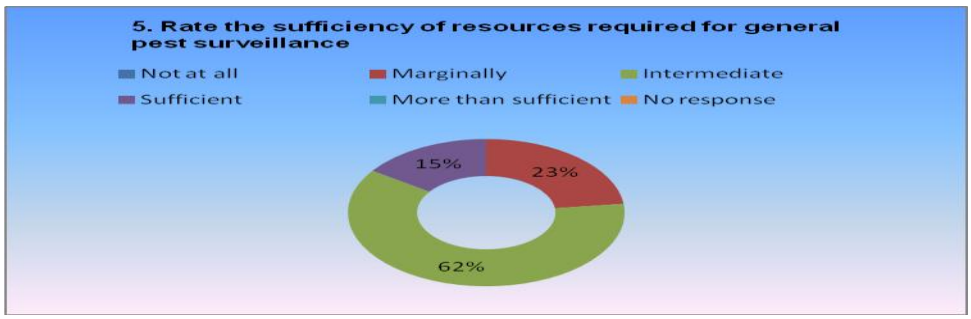


Latin American: general surveillance

Strengths and opportunities

- 100 percent of respondents indicated that there is a national database for plant pest records
- 85 percent of respondents indicated that NPPOs have easy access to databases of plant pest records
- 85 percent of respondents indicated that there is a pest identification service for the public

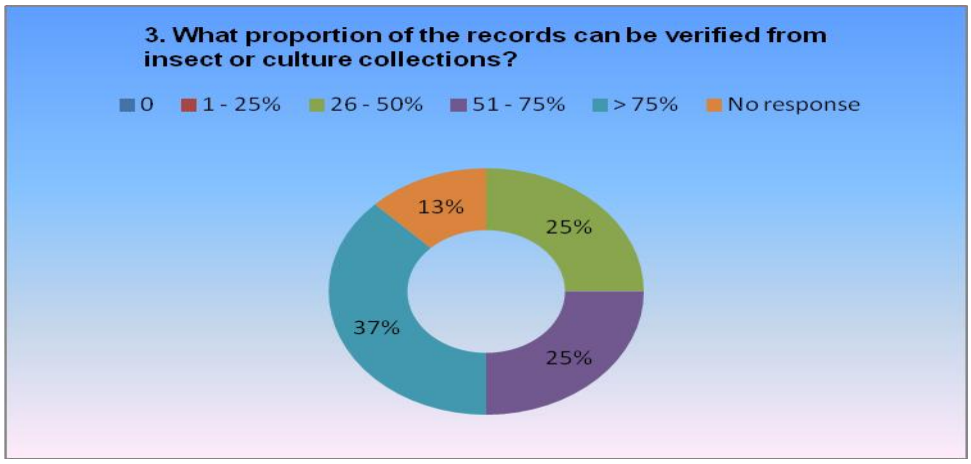


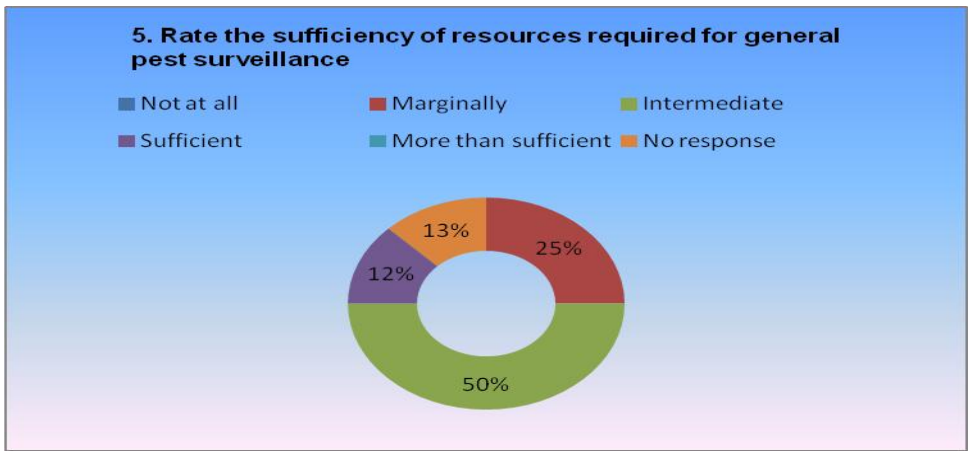


Southwest Pacific: general surveillance

Strengths and opportunities

- 87 percent of respondents indicated there is a national database for plant pest records
- 87 percent of respondents indicated NPPOs have easy access to databases of plant pest records
- 75 percent of respondents indicated that there is a pest identification service for the public



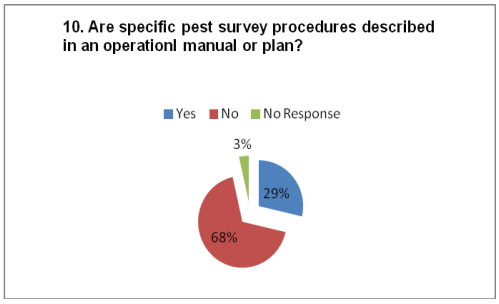


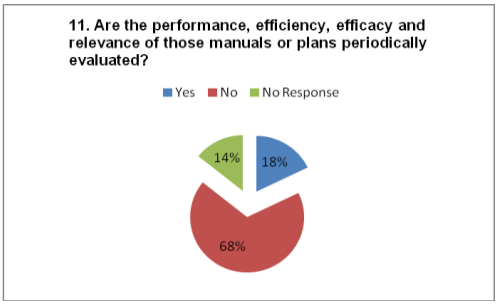
SPECIFIC SURVEYS

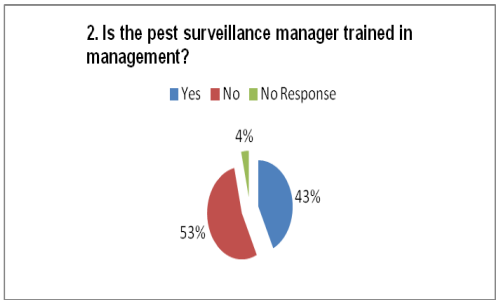
Africa: specific surveys

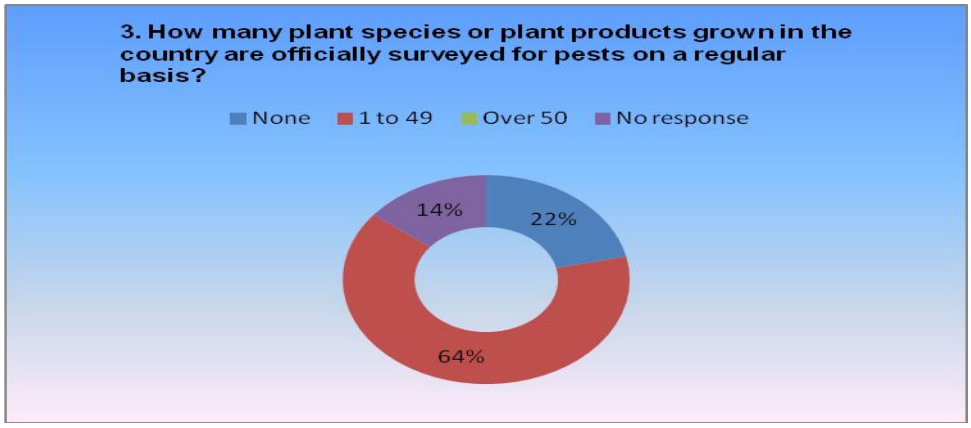
Strengths and opportunities:

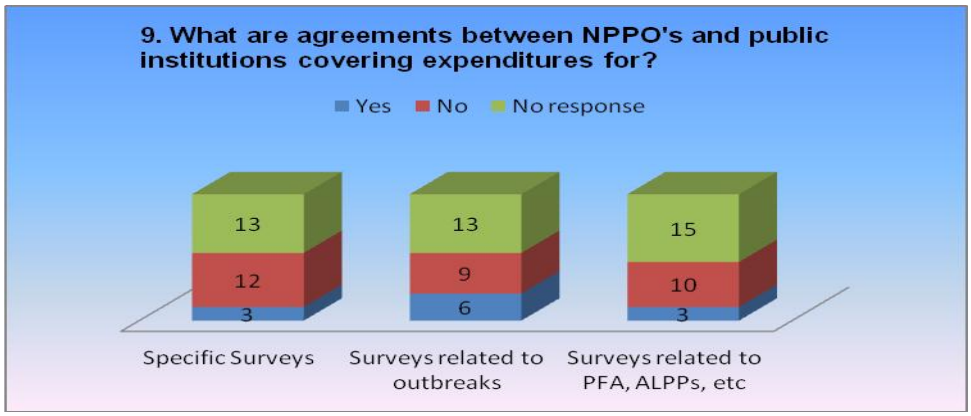
- 75 percent of respondents indicated there is a specific manager responsible for surveillance activities
- Challenges:
- 93 percent of respondents indicated that there are no agreements between NPPOs and industry (private institutions) to cover expenses for surveys
- 82 percent of respondents indicated that there are no agreements between NPPPOs and public institutions to cover expenditures for surveys







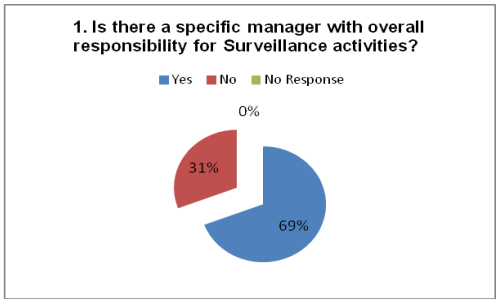


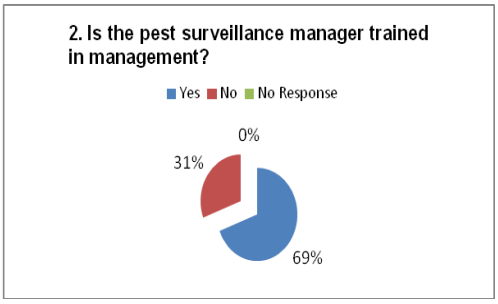


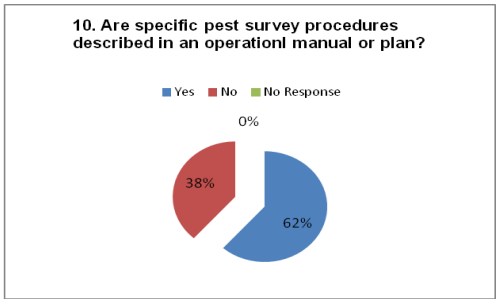
Asia: specific surveys

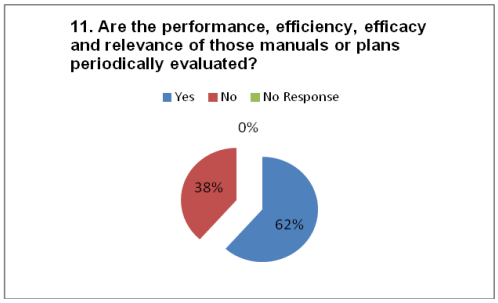
Challenges:

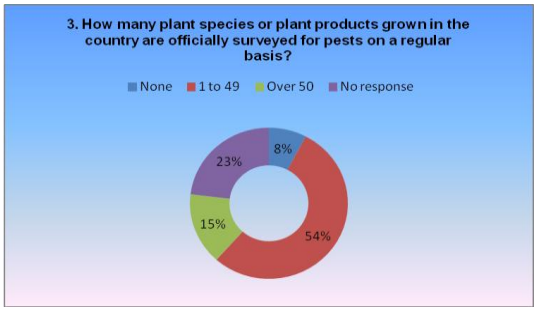
- 100 percent of respondents in the Asia region indicated there are no agreements between NPPOs, industry (or private institutions) for covering survey expenditures 69 percent of survey respondents indicated there are no agreements between NPPOs and public institutions to cover survey expenditures

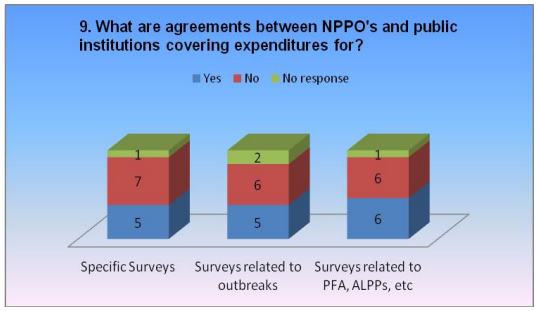








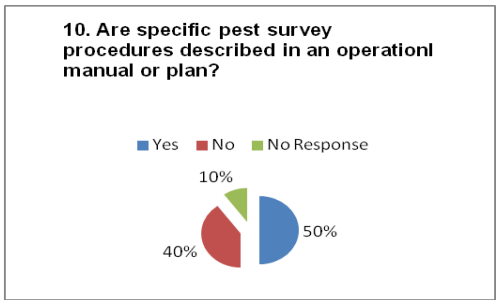


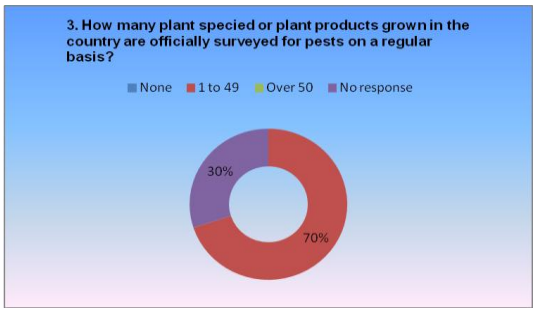


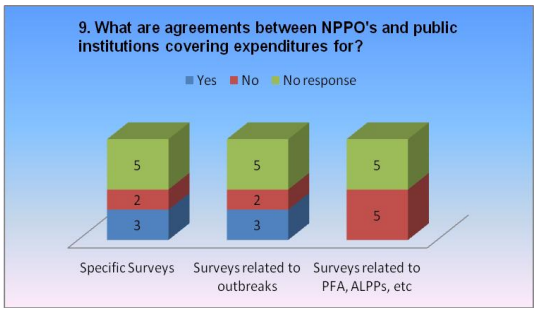
Caribbean: specific surveys

Challenges:

- 90 percent of respondents indicated that there are no agreements between NPPOs and industry (private institutions) to cover survey expenses
- 50 percent of respondents indicated there is no specific manager responsible for pest surveillance activities
- 60 percent of survey respondents indicated that the pest surveillance manager has not been trained in management
- 90 percent of respondents indicated that there are no agreements between NPPPOs and public institutions to cover survey expenditures
- 80 percent of respondents indicated there is no periodic evaluation of performance, efficiency, efficacy and relevance of manuals or plans







Eastern Europe and Central Asia: specific surveys

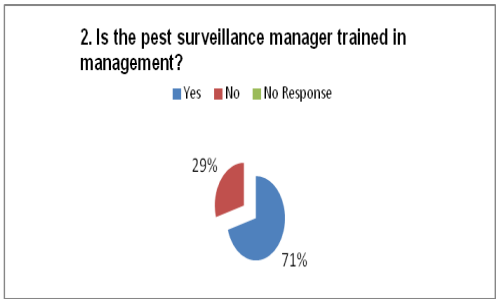
Strengths and opportunities:

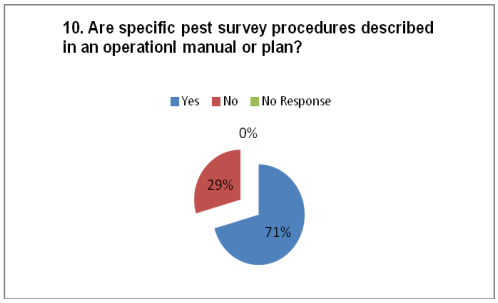
- 94 percent of respondents indicated a specific manager is responsible for surveillance activities

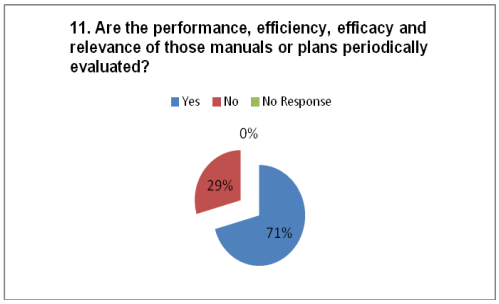
Challenges:

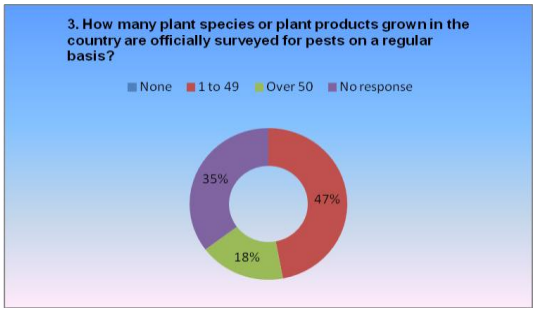
- 76 percent of respondents indicated that there are no agreements between NPPOs and industry (private institutions) to cover expenses for surveys

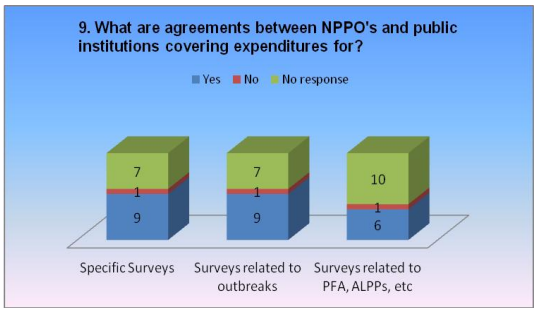
- 59 percent of respondents indicated that there are no agreements between NPPPOs and public institutions to cover expenditures for surveys











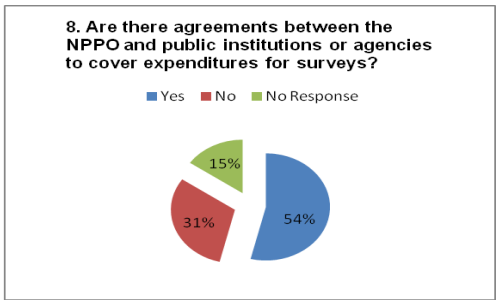
Latin America: specific surveys

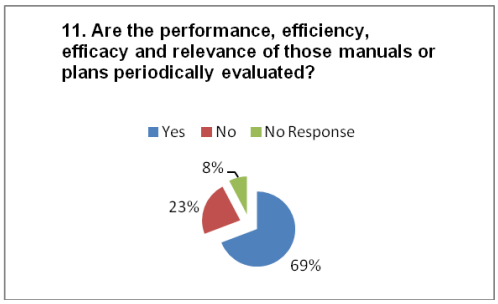
Strengths and opportunities:

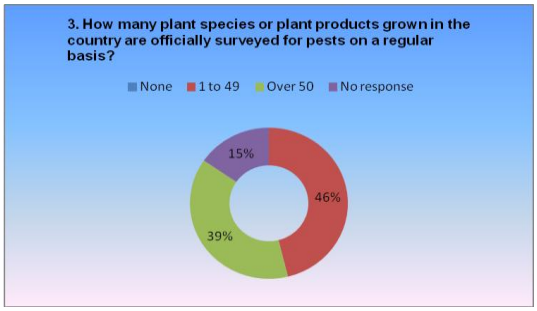
- 84 percent of respondents indicated that a specific manager is in place who is responsible for surveillance activities
- 84 percent of respondents indicated that the pest surveillance manager was trained in management
- 92 percent of respondents indicated that specific pest survey procedures are described in an operational manual or plan

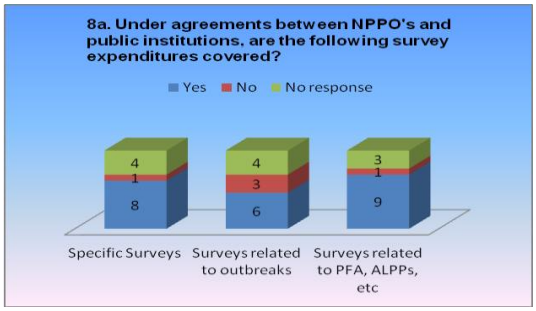
Challenges:

- 54 percent of respondents indicated that there are no agreements between NPPOs and industry (private institutions) to cover expenses for surveys





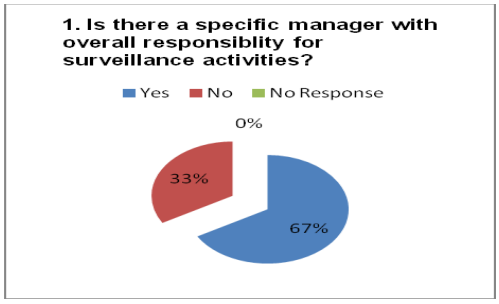


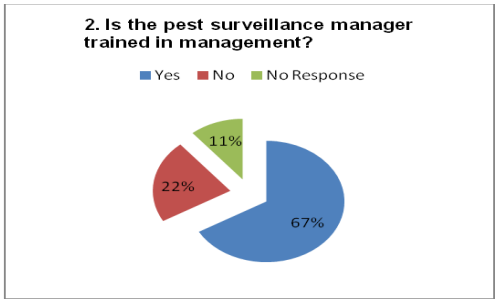


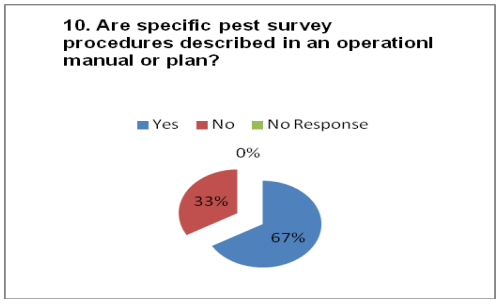
Near East: specific surveys

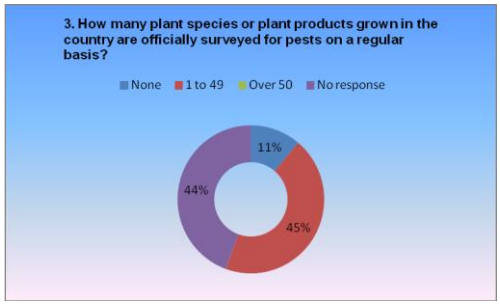
Challenges:

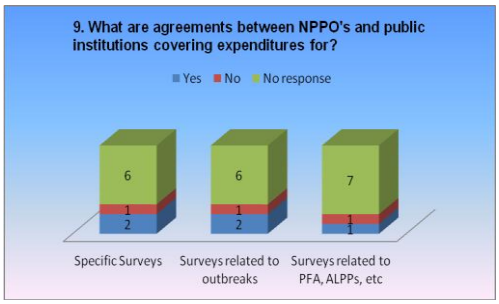
- 78 percent of respondents indicated there are no agreements between NPPOs and industry (private institutions) to cover survey expenses
- 67 percent of respondents indicated there are no agreements between NPPPOs and public institutions to cover survey expenditures
- *33 percent of respondents did not answer the question regarding periodic evaluation of performance, efficiency, efficacy and relevance of manuals or plans











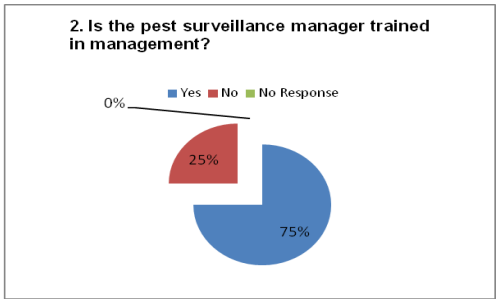
Southwest Pacific: specific surveys

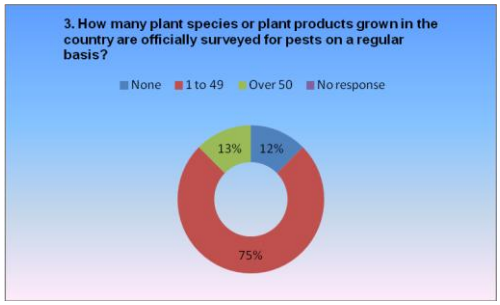
Strengths and opportunities:

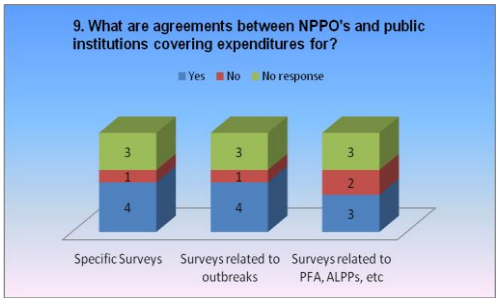
- 89 percent of respondents indicated a specific manager is responsible for surveillance activities

Challenges:

- 67 percent of respondents indicated there are no agreements between NPPO and industry (private institutions) to cover survey expenses
- 56 percent of respondents indicated there are no agreements between NPPPO's and public institutions to cover survey expenditures
- 50 percent of respondents indicated that specific pest survey procedures are not described in an operational plan or manual
- 50 percent of respondents indicated that the performance, efficiency, efficacy and relevance of manuals or plans are periodically evaluated





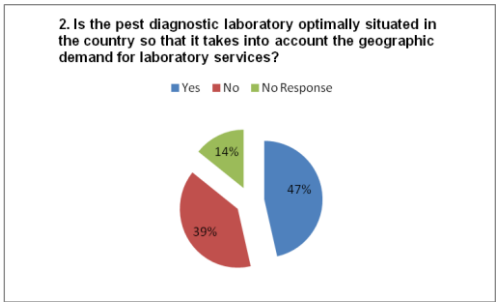


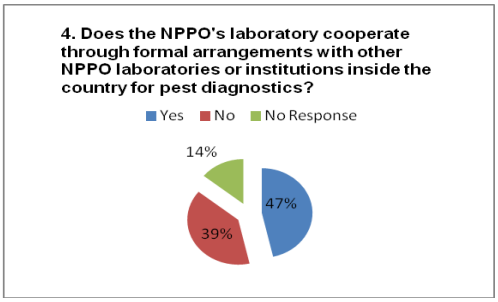
PEST DIAGNOSTICS

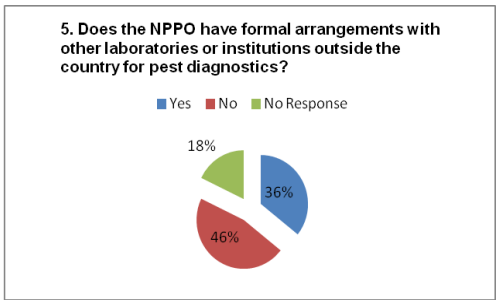
Africa: pest diagnostics

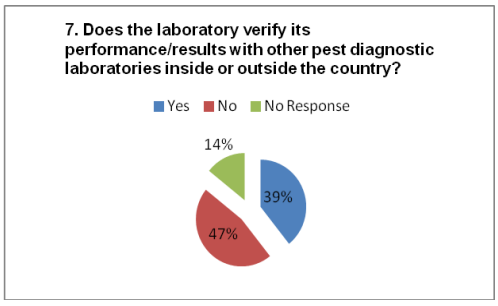
Challenges:

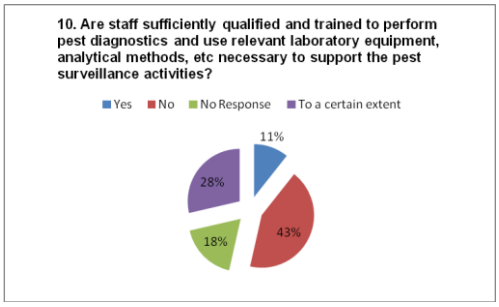
- 68 percent of respondents indicate that NPPOs are not the sole providers of pest diagnostic services in their countries
- 64 percent of respondents indicate that NPPOs do not use virtual diagnostics, i.e. transmission of images of pests to a central diagnostic service inside or outside of the country
- 82 percent of respondents indicate that NPPO pest diagnostic laboratories are not accredited to formal ISO standards, i.e. ISO 17025
- 68 percent of respondents indicate that other pest diagnostic laboratories in the country are not accredited to formal ISO standards, i.e. 17025

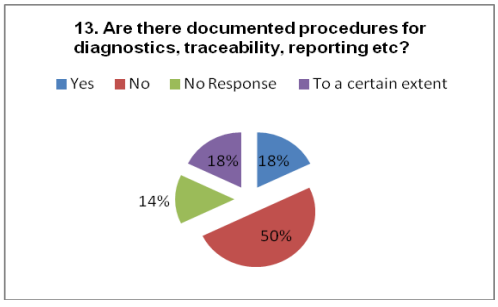


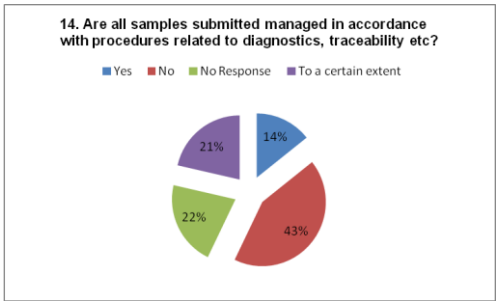


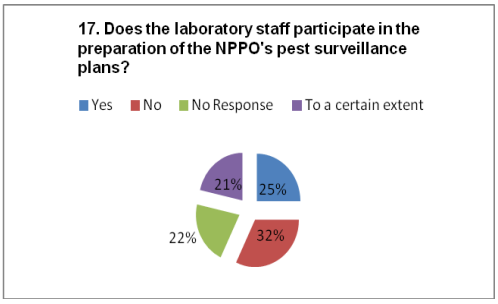


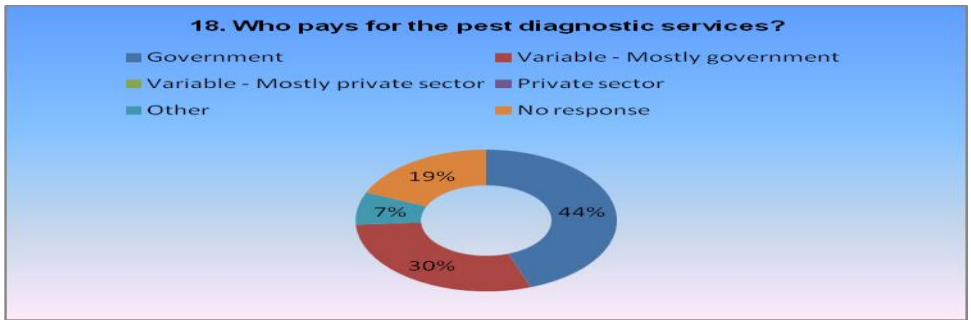


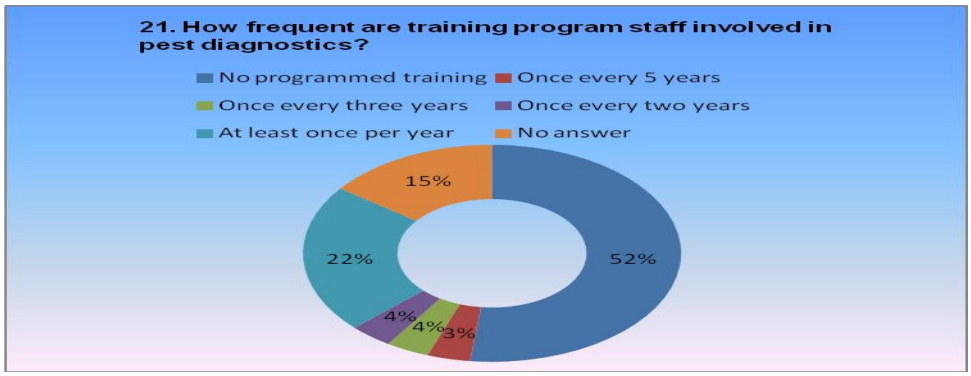












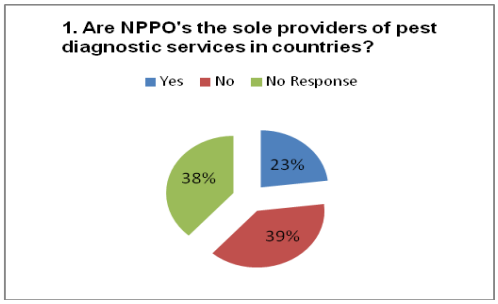
Asia: pest diagnostics

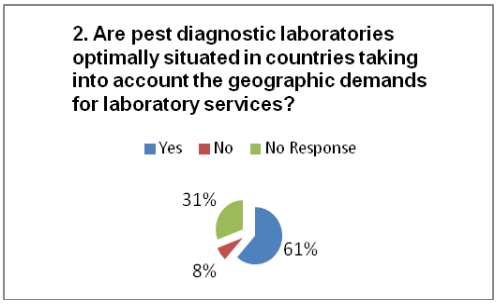
Strengths and opportunities

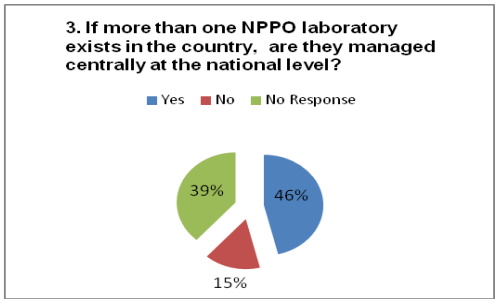
- 62 percent of respondents indicated that there are documented procedures for sampling, sampling delivery, intermediate storage and delivery
- 62 percent of respondents indicated that laboratories provide pest surveillance staff collection kits for different types of specimens and samples
- 69 percent of respondents indicated that laboratory staff provide training on taking samples and field recognition of pests and their symptoms to staff involved in pest surveillance

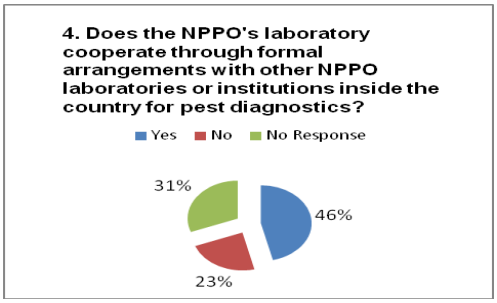
Challenges:

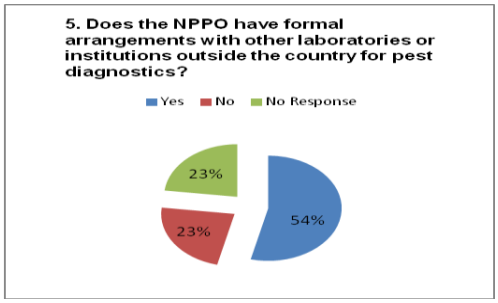
- 46 percent of respondents indicated that when planning for pest surveillance, any pest diagnostic services that might be needed are not costed separately

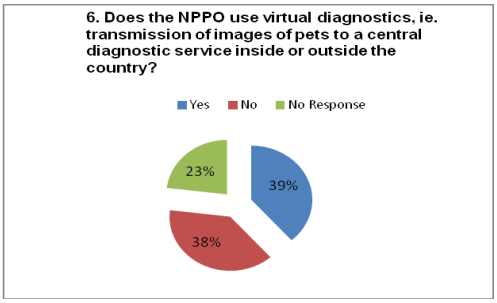


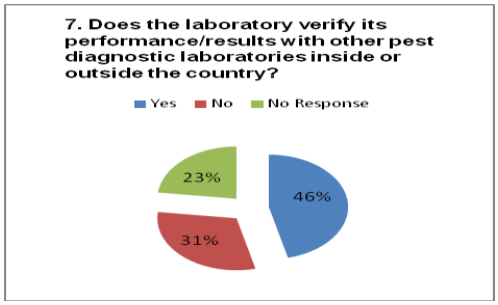


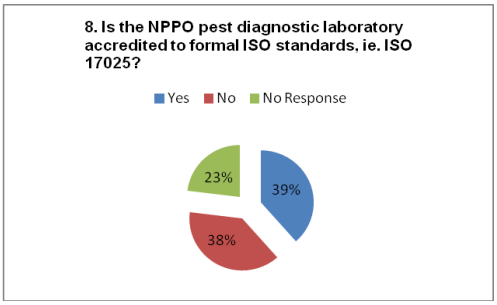


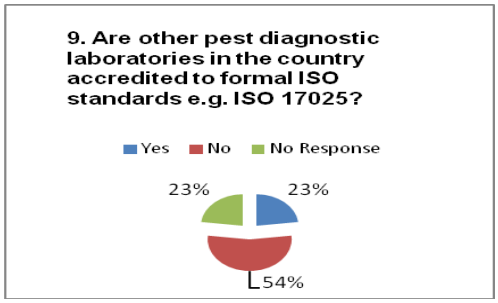


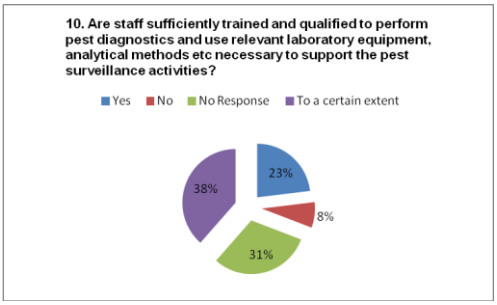


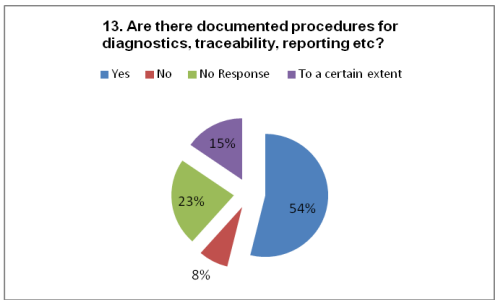


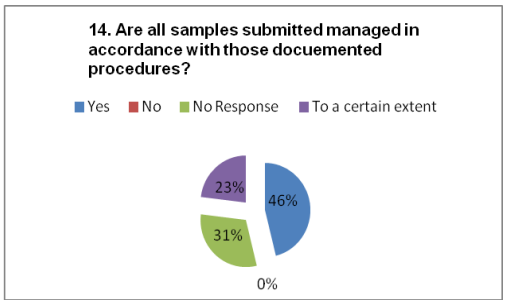


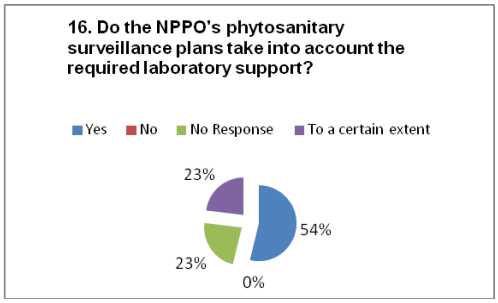


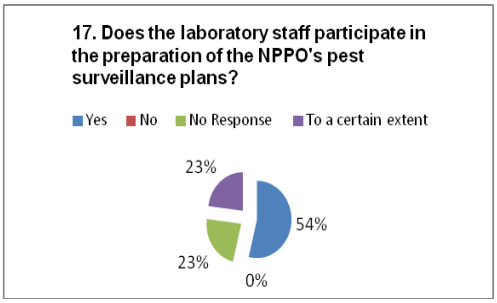


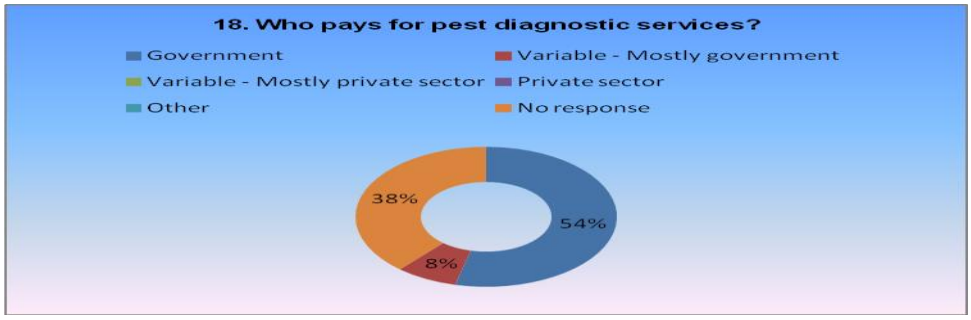












Caribbean: pest diagnostics

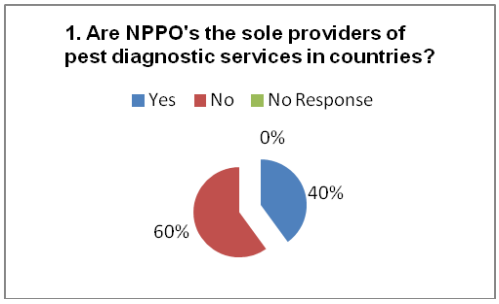
Strengths and opportunities

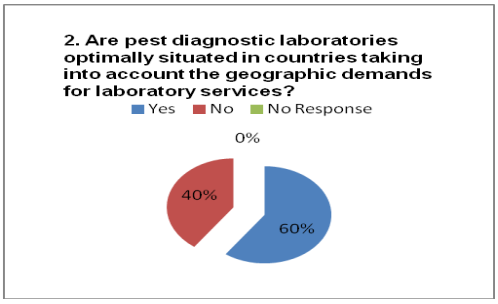
- 70 percent of respondents indicated that there are documented procedures for diagnostics, traceability, reporting, etc. *to a certain extent*
- 70 percent of respondents indicated that all samples submitted are managed in accordance with documented procedures *to certain extent*
- 50 percent of respondents indicated that laboratory staff participate in the preparation of the NPPO pest surveillance plan

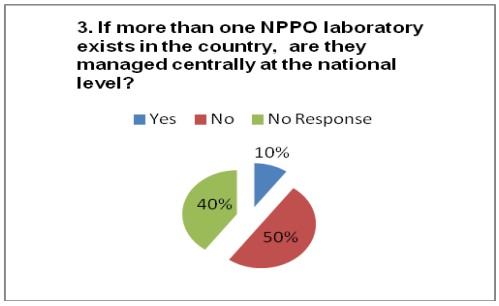
- 90 percent of respondents indicated that laboratory staff provide training on taking samples and field recognition of pests and their symptoms to staff involved in pest surveillance

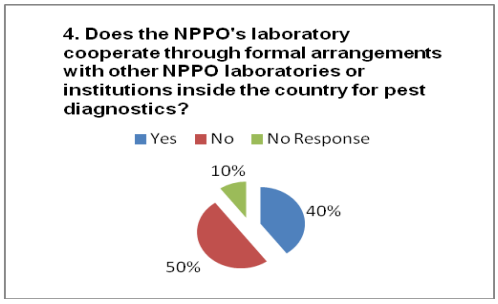
Challenges:

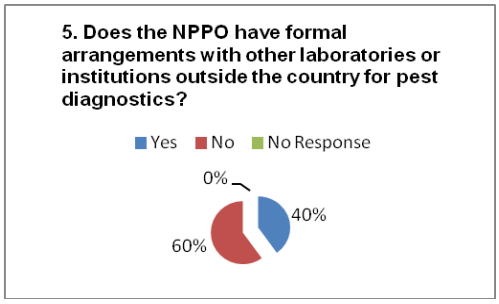
- 100 percent of respondents indicated that NPPO pest diagnostics laboratories in countries are not accredited to formal ISO standards eg. ISO 17025
- 100 percent of respondents indicated that other pest diagnostic laboratories in countries are not accredited to formal ISO standards eg. ISO17025

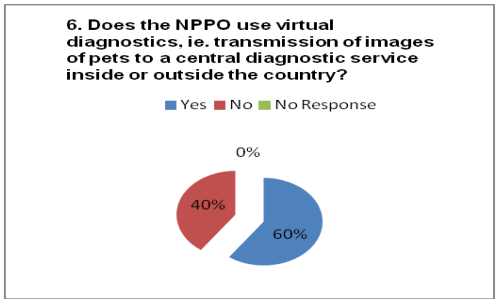


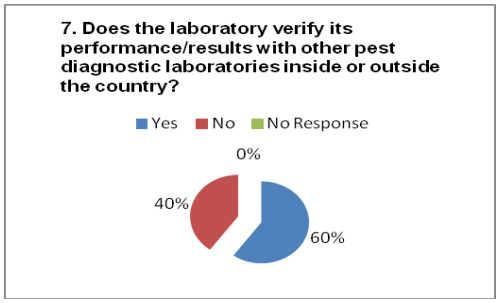


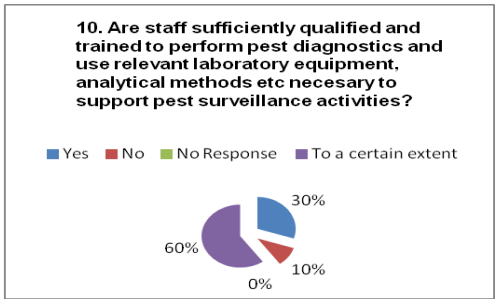


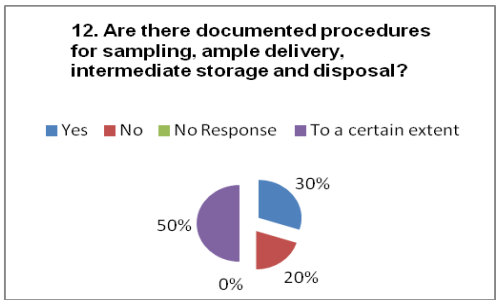


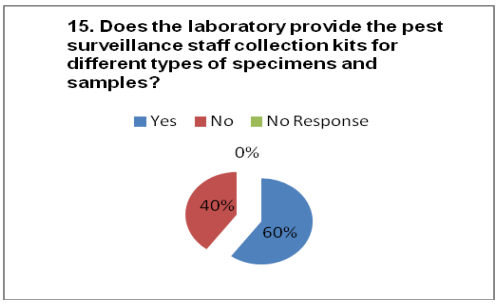


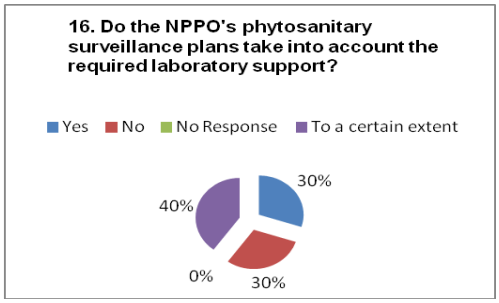


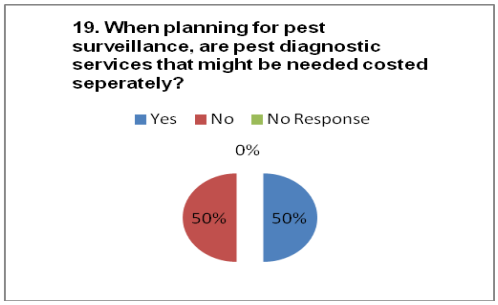












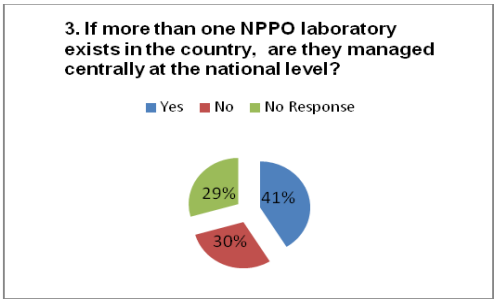
Eastern Europe and Central Asia: pest diagnostics

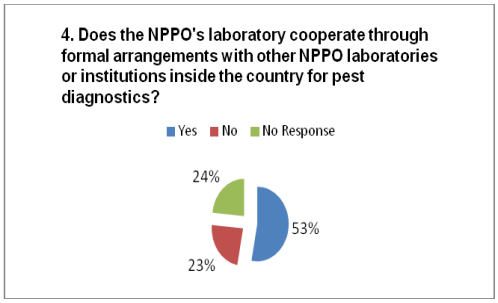
Strengths and opportunities

- 70 percent of respondents indicated that pest diagnostic laboratories are optimally situated in countries so that they take into account the geographic demand for laboratory services
- 70 percent of respondents indicated that laboratory staff participate in the preparation of the NPPO pest surveillance plan

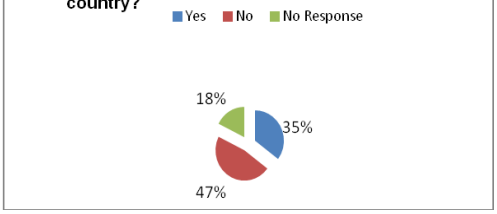
Challenges:

- 59 percent of respondents indicated that NPPO staff are not the sole providers of pest diagnostic services in the countries
- 59 percent of respondents indicated that NPPO do not have formal arrangements with other laboratories or institutions outside the country for pest diagnostics
- 70 percent of respondents indicated that other pest diagnostic laboratories in the country are not accredited to formal ISO standards, e.g. ISO 17025

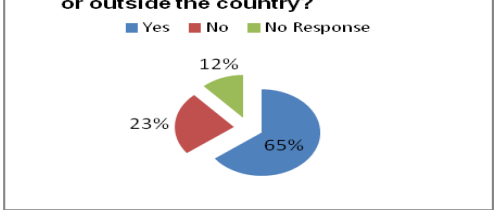




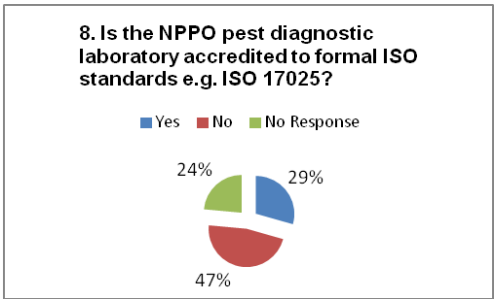
6. Does the NPPO use virtual diagnostics, ie. transmission of images of pets to a central diagnostic service inside or outside the country?



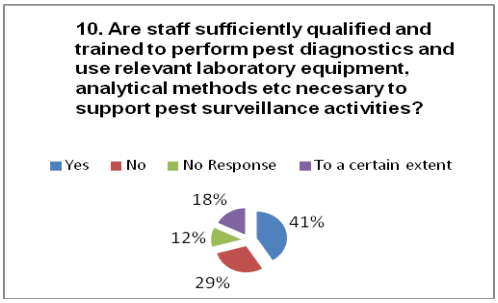
7. Does the laboratory verify its performance/results with other pest diagnostic laboratories inside or outside the country?



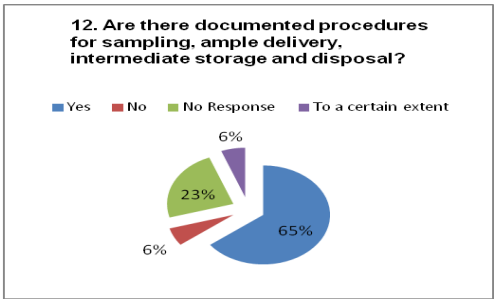
8. Is the NPPO pest diagnostic laboratory accredited to formal ISO standards e.g. ISO 17025?



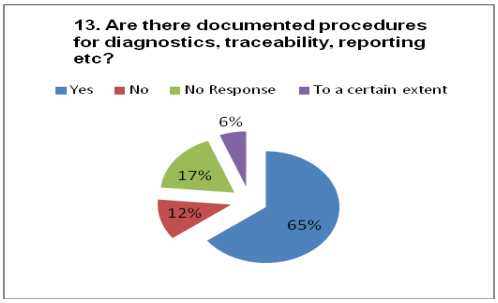
10. Are staff sufficiently qualified and trained to perform pest diagnostics and use relevant laboratory equipment, analytical methods etc necesary to support pest surveillance activities?



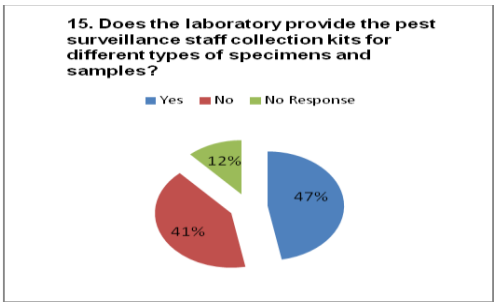
12. Are there documented procedures for sampling, ample delivery, intermediate storage and disposal?



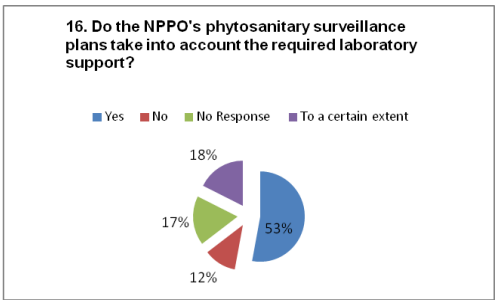
13. Are there documented procedures for diagnostics, traceability, reporting etc?



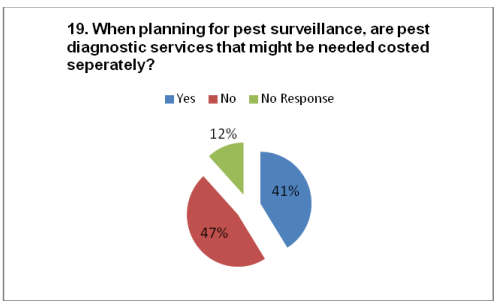
15. Does the laboratory provide the pest surveillance staff collection kits for different types of specimens and samples?



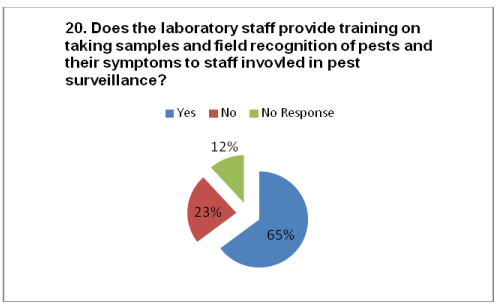
16. Do the NPPO's phytosanitary surveillance plans take into account the required laboratory support?

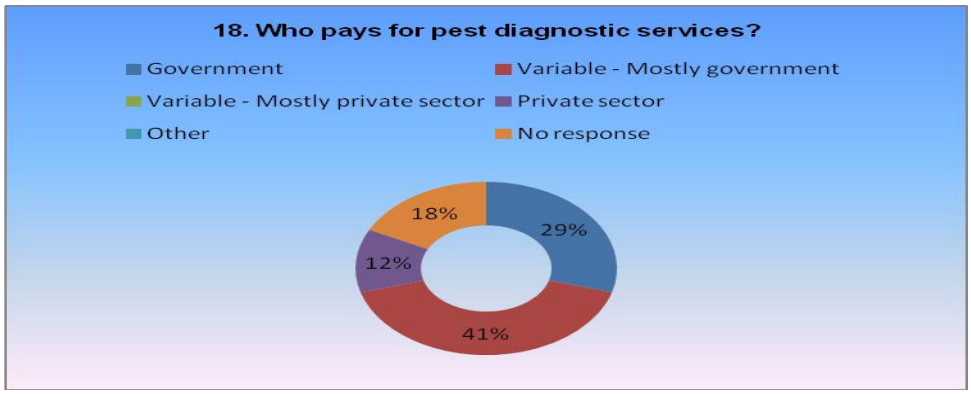


19. When planning for pest surveillance, are pest diagnostic services that might be needed costed seperately?



20. Does the laboratory staff provide training on taking samples and field recognition of pests and their symptoms to staff invovled in pest surveillance?





Latin America: pest diagnostics

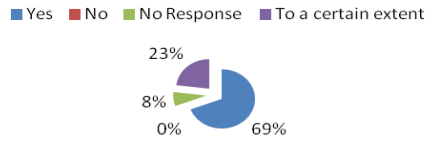
Strengths and opportunities

- 85 percent of respondents indicated that if more than one NPPO laboratory exists in the country, they are managed centrally at the national level
- 85 percent of respondents indicated that there are documented procedures for diagnostics, traceability, reporting, etc.
- 85 percent of respondents indicated that all samples submitted are managed in accordance with these procedures
- 83 percent of respondents indicated that laboratory staff are providing training on taking samples and field recognition of pests and their symptoms to staff involved in pest surveillance

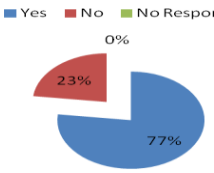
Challenges:

- 92 percent of respondents indicated that NPPOs are the sole providers of pest diagnostic services in their respective countries

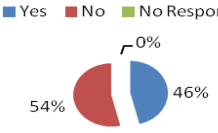
2. Is the pest diagnostic laboratory optimally situated in the country so that it takes into account the geographic demand for laboratory services?



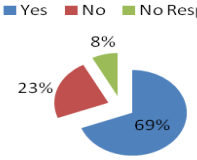
4. Does the NPPOs laboratory cooperate through formal arrangements with other non-NPPO laboratories inside the country for pest diagnostics?



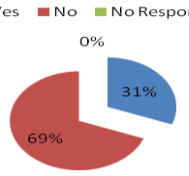
6. Does the NPPO use virtual diagnostics, ie. transmission of images of pests to a central diagnostic service or outside the country?



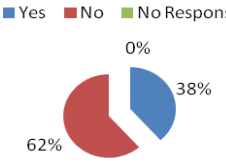
7. Does the laboratory verify its performance results with other pest diagnostic laboratories inside or outside the country?



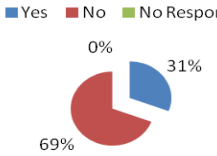
5. Does the NPPO have formal arrangements with other laboratories outside the country for pest diagnostics?



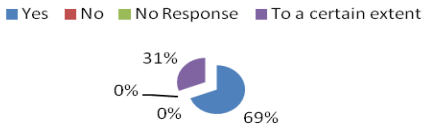
8. Is the NPPO pest diagnostic laboratory accredited to formal ISO standards e.g. ISO 17025?



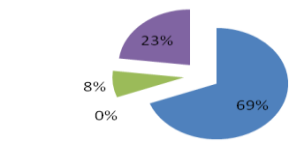
9. Are other pest diagnostic laboratories in the country accredited to formal ISO standards? ie. ISP 17025?



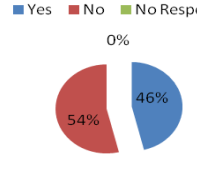
10. Are staff sufficiently qualified and trained to perform pest diagnostics and use relevant laboratory equipment, analytical methods, etc. necessary to support the pest surveillance activities?

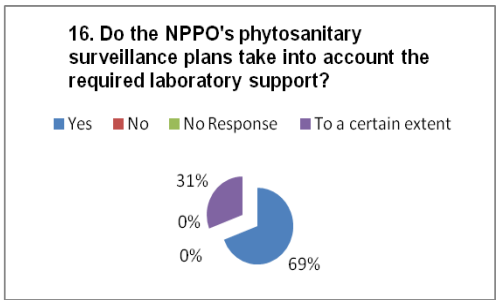


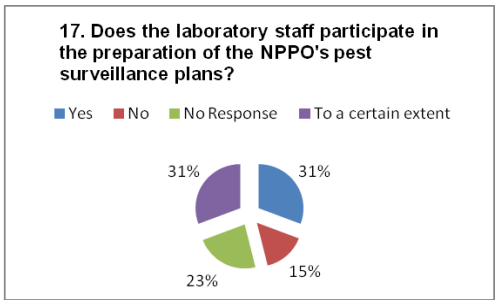
12. Are there documented procedures for sampling, sampling delivery, intermediate storage and disposal?

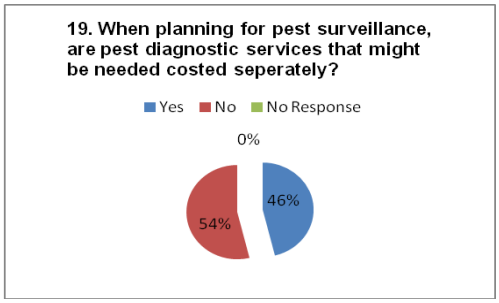


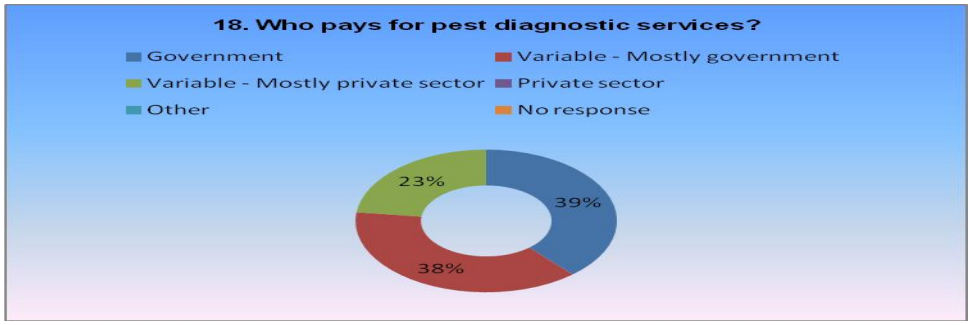
15. Does the laboratory provide the pest surveillance staff collection kits for different types of specimens and samples?











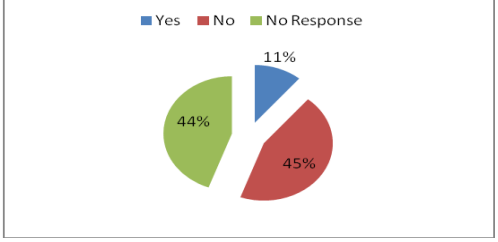
Near East: pest diagnostics

Challenges

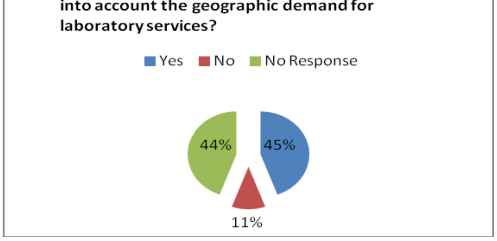
- 56 percent of respondents did not answer the question: If more than one laboratory exists in the country, are they managed centrally at the national level?
- 56 percent of respondents did not answer the question: Are all samples submitted in accordance with documented procedures?

* A number of countries in this region did not respond to many questions under Pest Diagnostics

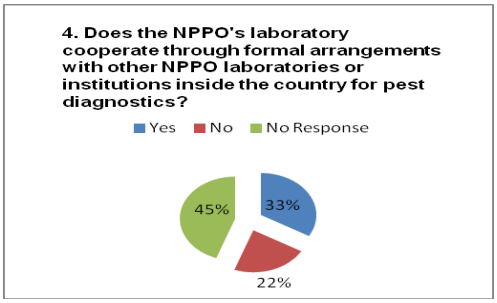
1. Is the NPPO the sole provider of pest diagnostic services in the country?



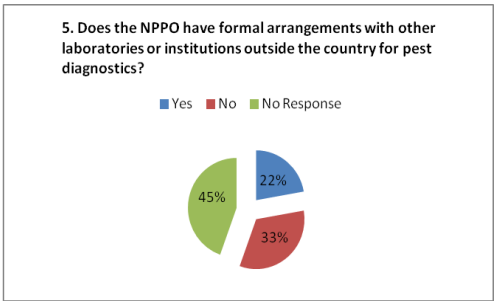
2. Is the pest diagnostic laboratory (ies) optimally situated in the country so that it takes into account the geographic demand for laboratory services?



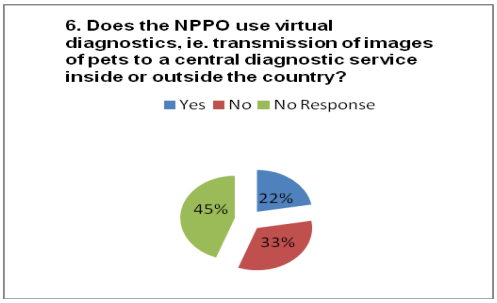
4. Does the NPPO's laboratory cooperate through formal arrangements with other NPPO laboratories or institutions inside the country for pest diagnostics?



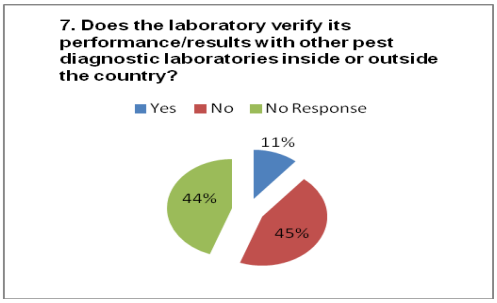
5. Does the NPPO have formal arrangements with other laboratories or institutions outside the country for pest diagnostics?



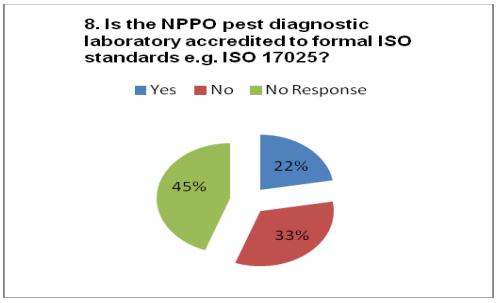
6. Does the NPPO use virtual diagnostics, ie. transmission of images of pets to a central diagnostic service inside or outside the country?



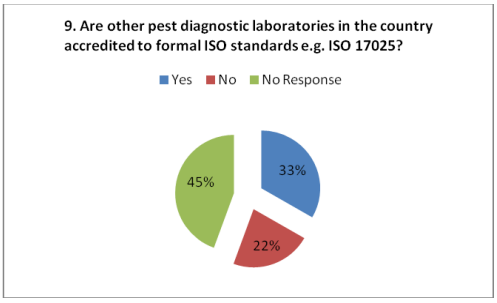
7. Does the laboratory verify its performance/results with other pest diagnostic laboratories inside or outside the country?



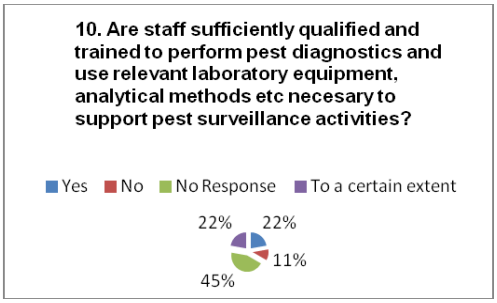
8. Is the NPPO pest diagnostic laboratory accredited to formal ISO standards e.g. ISO 17025?



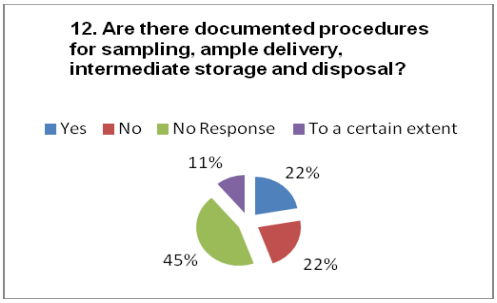
9. Are other pest diagnostic laboratories in the country accredited to formal ISO standards e.g. ISO 17025?

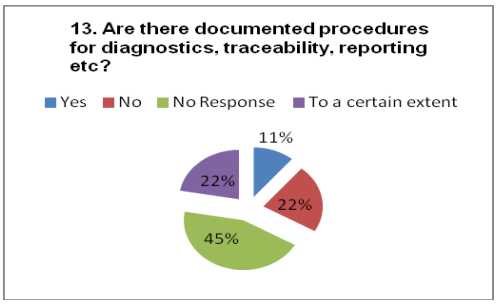


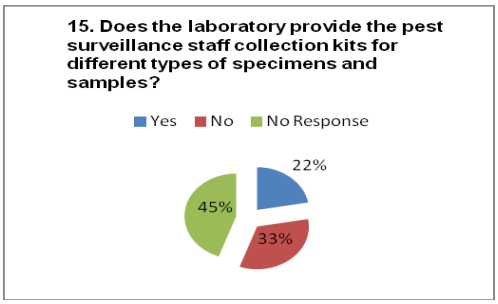
10. Are staff sufficiently qualified and trained to perform pest diagnostics and use relevant laboratory equipment, analytical methods etc necesary to support pest surveillance activities?

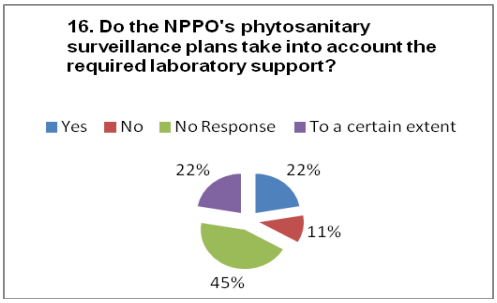


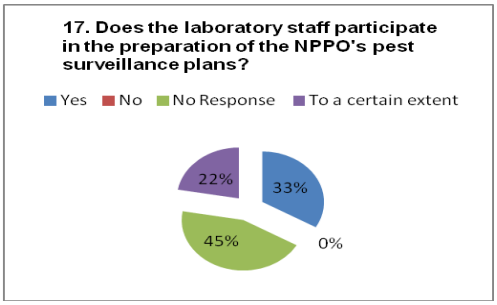
12. Are there documented procedures for sampling, ample delivery, intermediate storage and disposal?

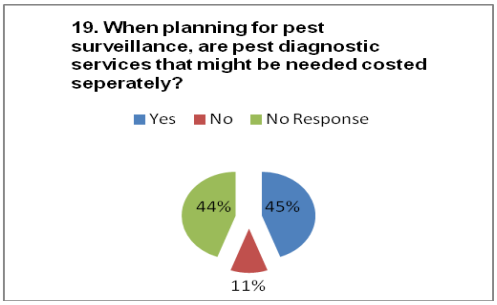


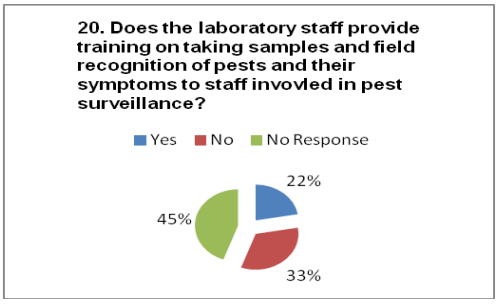

13. Are there documented procedures for diagnostics, traceability, reporting etc?
Yes
No
No Response
To a certain extent
11%
22%
22%
45%

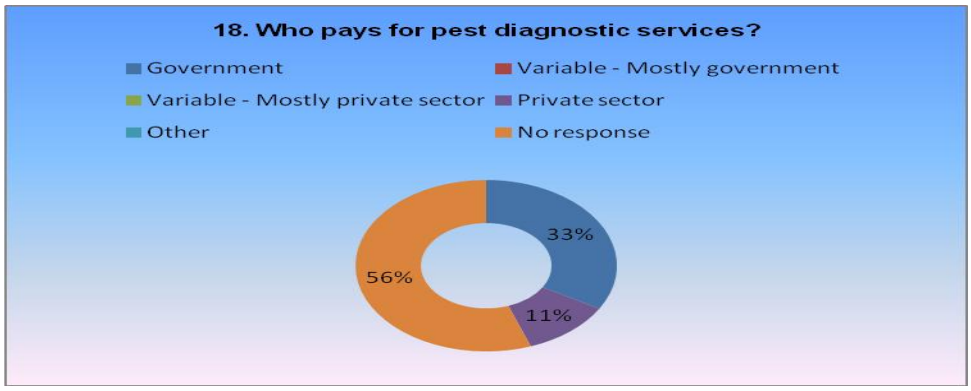

15. Does the laboratory provide the pest surveillance staff collection kits for different types of specimens and samples?
Yes
No
No Response
22%
45%
33%


16. Do the NPPO's phytosanitary surveillance plans take into account the required laboratory support?
Yes
No
No Response
To a certain extent
22%
22%
11%
45%


17. Does the laboratory staff participate in the preparation of the NPPO's pest surveillance plans?
Yes
No
No Response
To a certain extent
22%
33%
45%
0%


19. When planning for pest surveillance, are pest diagnostic services that might be needed costed seperately?
Yes
No
No Response
44%
45%
11%


20. Does the laboratory staff provide training on taking samples and field recognition of pests and their symptoms to staff invovled in pest surveillance?
Yes
No
No Response
22%
45%
33%


18. Who pays for pest diagnostic services?
Government
Variable - Mostly government
Variable - Mostly private sector
Private sector
Other
No response
33%
56%
11%


21. How frequent are training programs for staff involved in pest diagnostics?
No programmed training
Once every 5 years
Once every three years
Once every two years
At least once per year
No response
33%
45%
22%

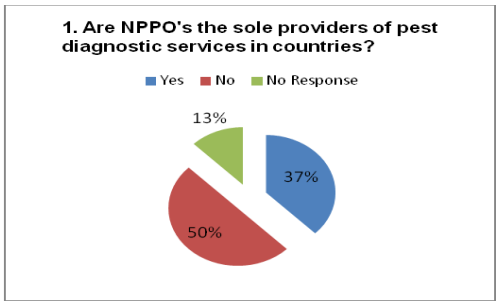
Southwest Pacific: pest diagnostics

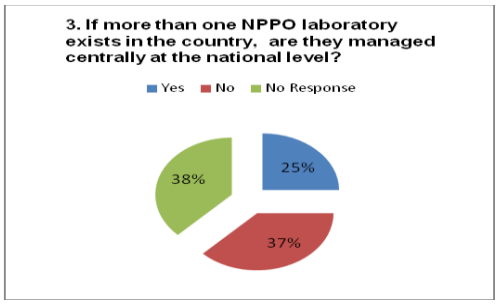
Strengths and opportunities

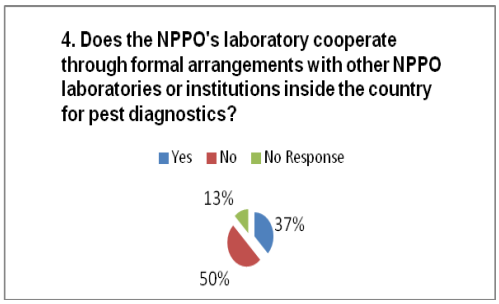
- 75 percent of respondents indicated that pest diagnostic laboratories are optimally situated in countries so that they take into account the geographic demand for laboratory services
- 75 percent of respondents indicated that NPPOs use virtual diagnostics, i.e. transmission of images of pests to a central diagnostic service inside or outside of the country
- 75 percent of respondents indicated that there are documented procedures for sampling, sample delivery, intermediate storage and disposal
- 87 percent of respondents indicated that all samples submitted are managed in accordance with these procedures
- 78 percent of respondents indicated that NPPO phytosanitary surveillance plans take into account the required laboratory support
- 75 percent of respondents indicated that staff at laboratories participate in the preparation of NPPO pest surveillance plans
- 75 percent of respondents indicated that laboratory staff provide training on taking samples and field recognition of pests and their symptoms to staff involved in pest surveillance

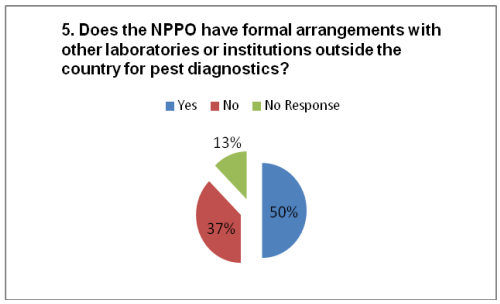
Challenges:

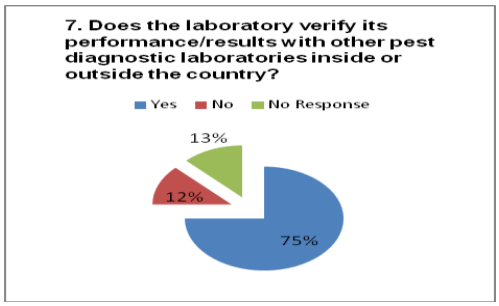
- 75 percent of respondents indicated that NPPO pest diagnostic laboratories are not accredited to formal ISO standards, e.g. ISO 17025

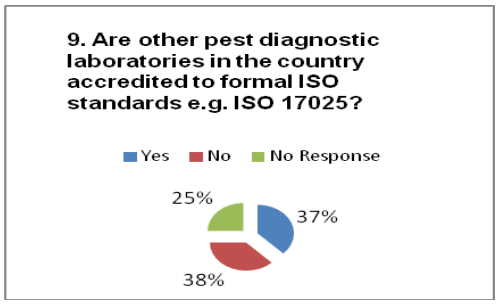


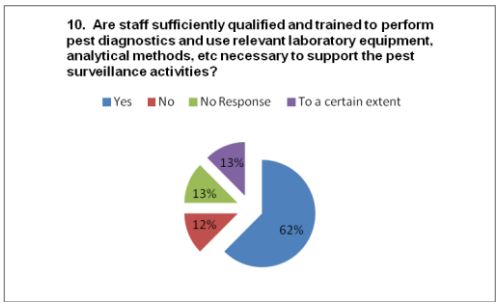


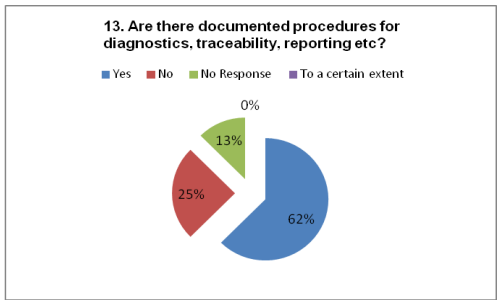


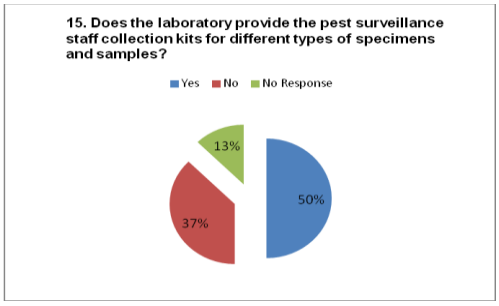


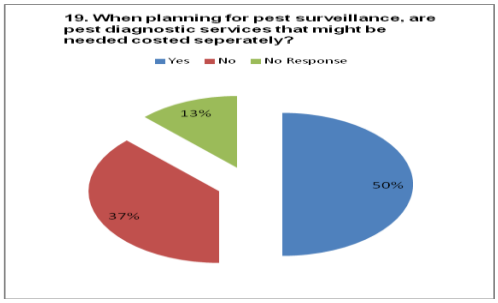

7. Does the laboratory verify its performance/results with other pest diagnostic laboratories inside or outside the country?
Yes
No
No Response
13%
12%
75%

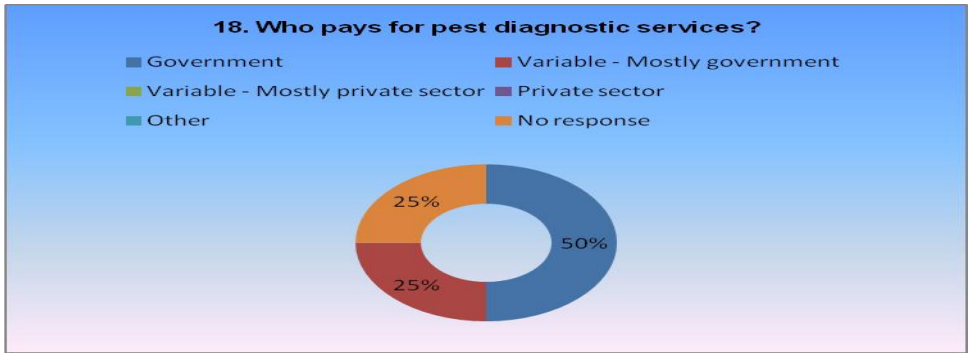

9. Are other pest diagnostic laboratories in the country accredited to formal ISO standards e.g. ISO 17025?
Yes
No
No Response
25%
37%
38%


10. Are staff sufficiently qualified and trained to perform pest diagnostics and use relevant laboratory equipment, analytical methods, etc necessary to support the pest surveillance activities?
Yes
No
No Response
To a certain extent
13%
13%
12%
62%


13. Are there documented procedures for diagnostics, traceability, reporting etc?
Yes
No
No Response
To a certain extent
0%
13%
25%
62%


15. Does the laboratory provide the pest surveillance staff collection kits for different types of specimens and samples?
Yes
No
No Response
13%
37%
50%

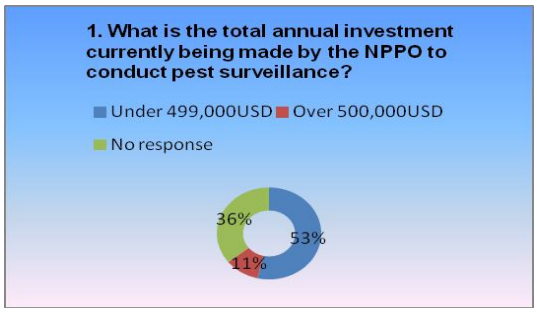

19. When planning for pest surveillance, are pest diagnostic services that might be needed costed seperately?
Yes
No
No Response
13%
37%
50%

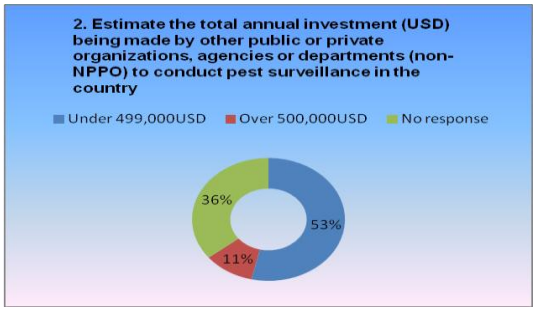

18. Who pays for pest diagnostic services?
Government
Variable - Mostly government
Variable - Mostly private sector
Private sector
Other
No response
25%
25%
50%

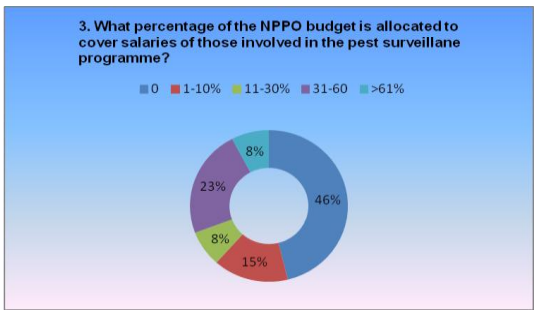

21. How frequent are training programs for staff involved in pest diagnostics?
No programmed training
Once every 5 years
Once every three years
Once every two years
At least once per year
No answer
13%
25%
50%
12%

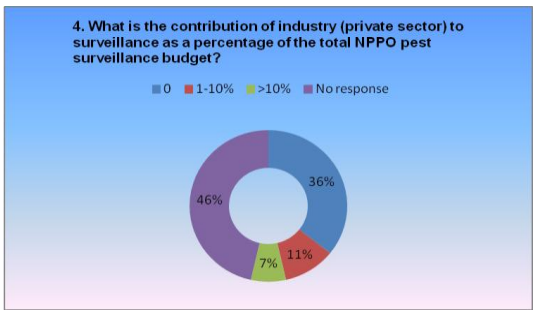
RESOURCES

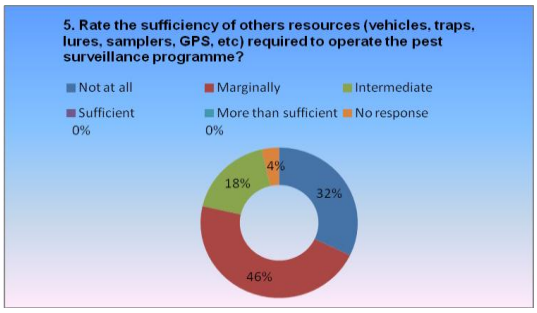
Africa: resources

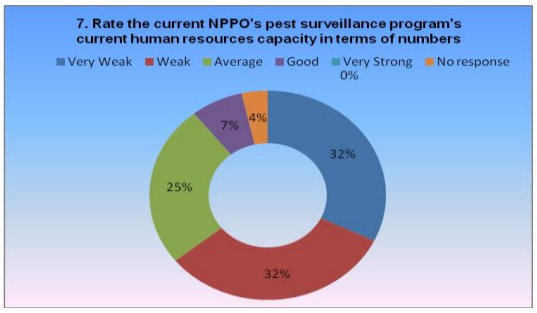


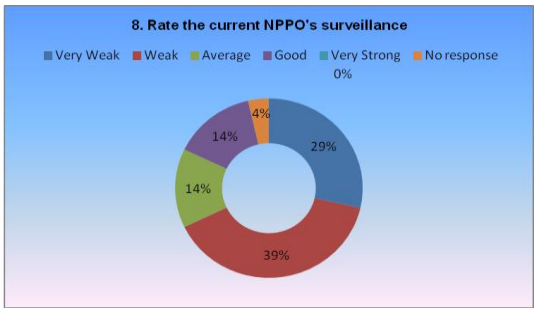


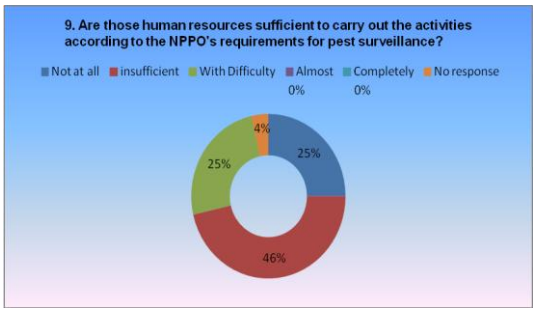


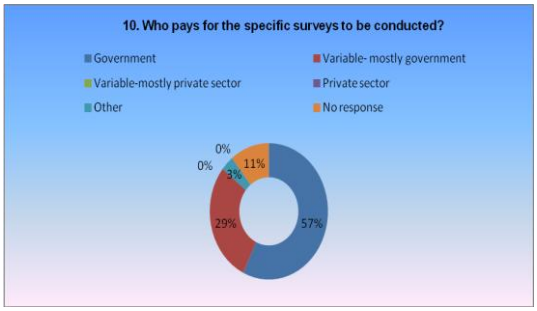


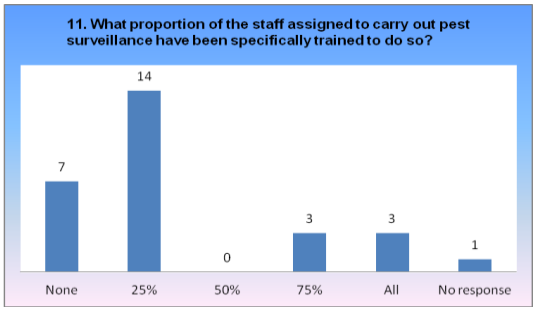


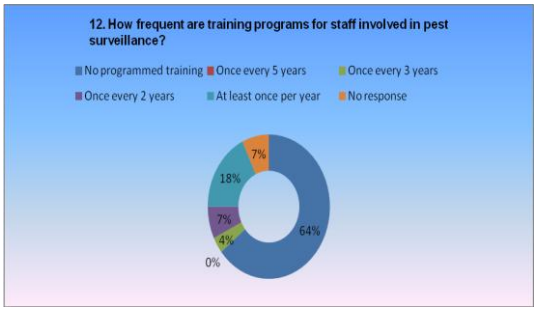




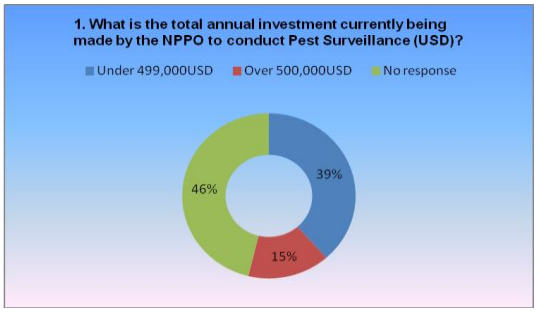


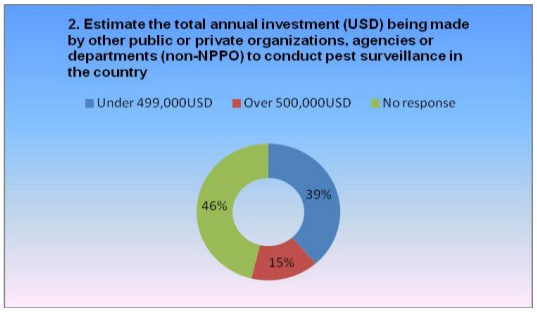


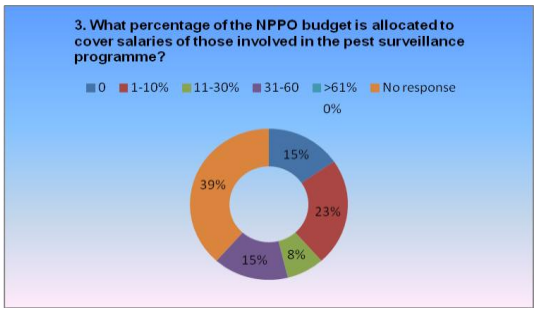


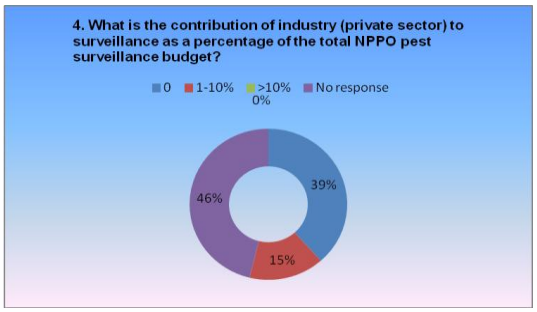


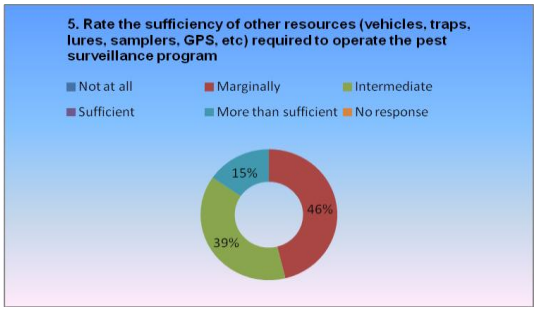
Asia: resources

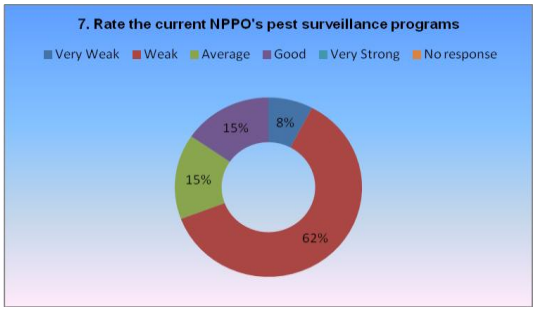


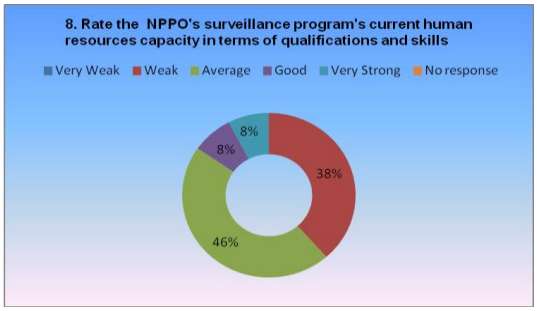


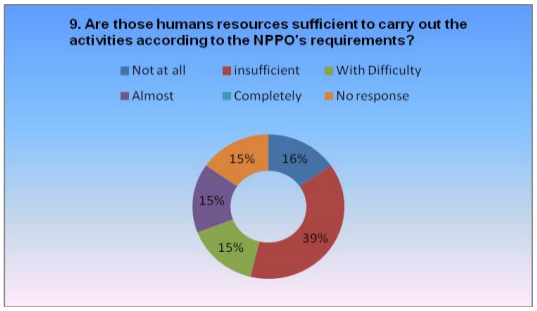


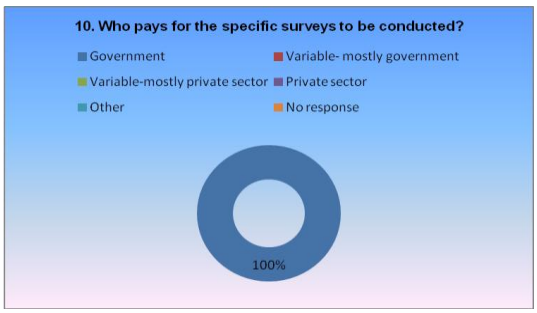


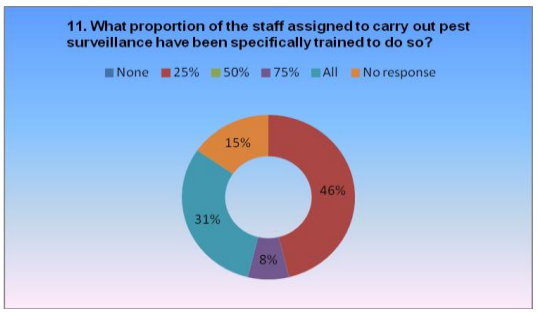


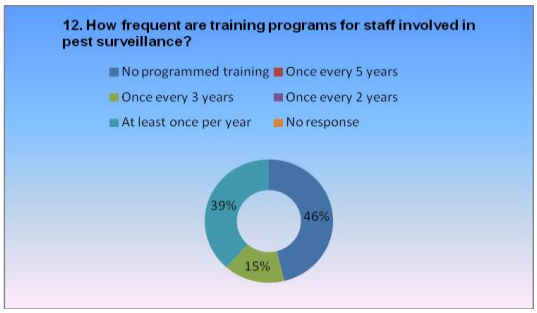




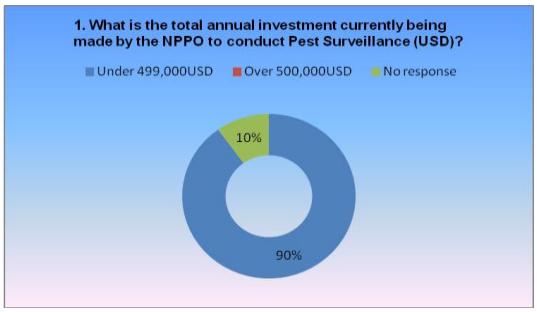


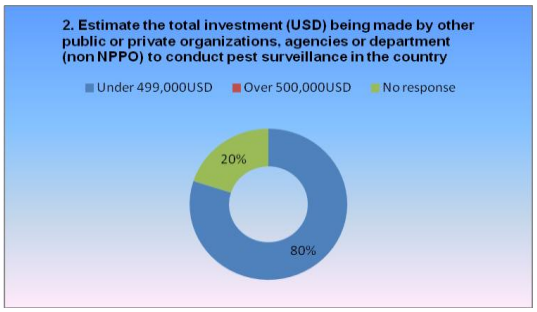


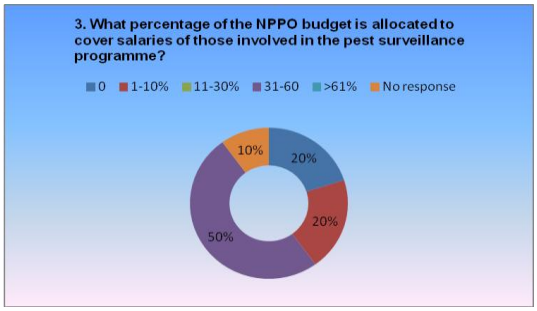


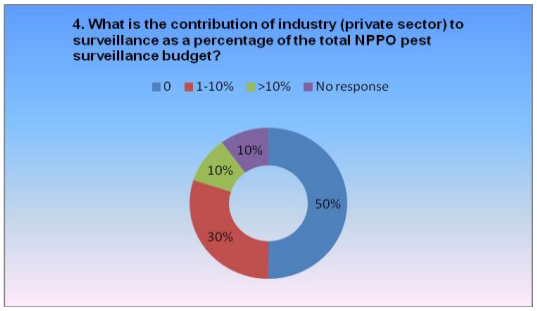


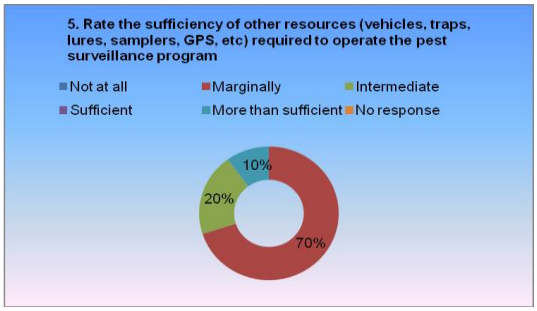
Caribbean: resources

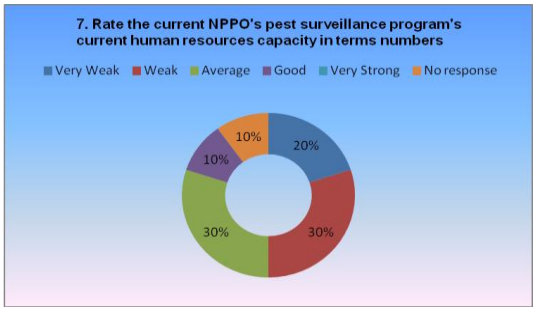


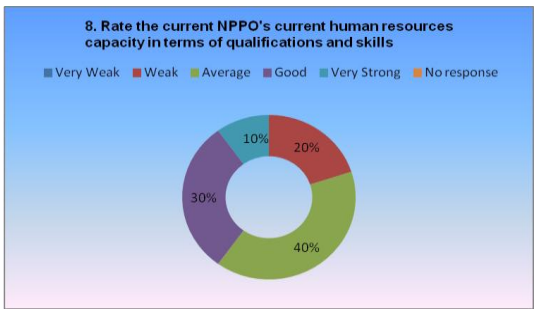


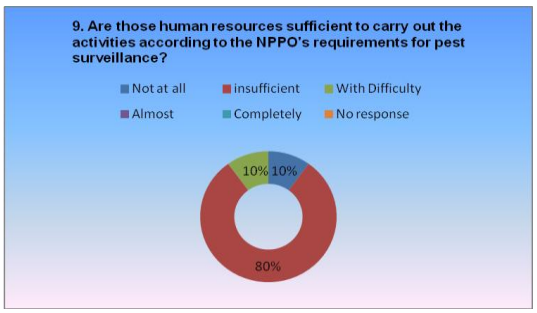

3. What percentage of the NPPO budget is allocated to cover salaries of those involved in the pest surveillance programme?
0
1-10%
11-30%
31-60
>61%
No response
20%
20%
50%
10%

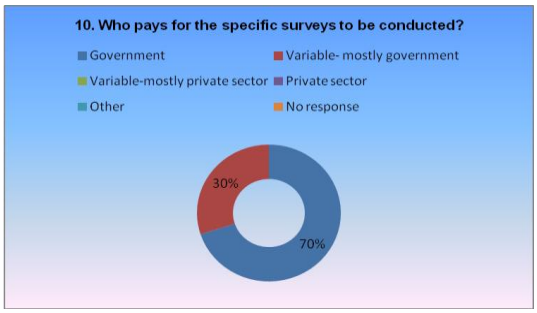

4. What is the contribution of industry (private sector) to surveillance as a percentage of the total NPPO pest surveillance budget?
0
1-10%
>10%
No response
50%
30%
10%
10%

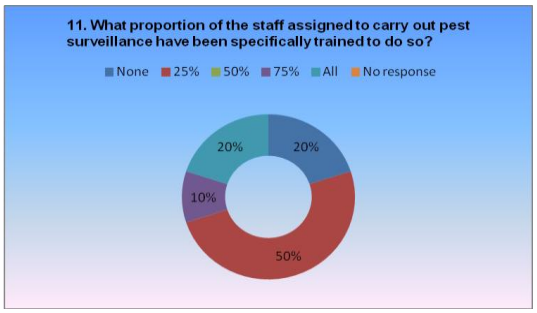

5. Rate the sufficiency of other resources (vehicles, traps, lures, samplers, GPS, etc) required to operate the pest surveillance program
Not at all
Marginally
Intermediate
Sufficient
More than sufficient
No response
10%
20%
70%

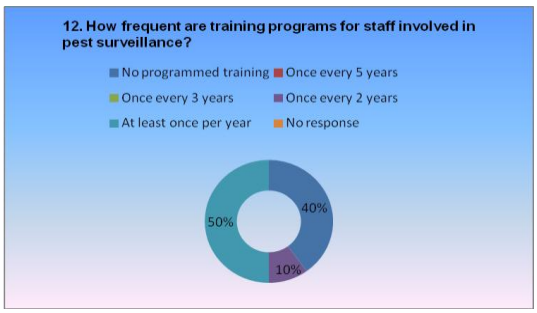

7. Rate the current NPPO's pest surveillance program's current human resources capacity in terms numbers
Very Weak
Weak
Average
Good
Very Strong
No response
20%
30%
30%
10%
10%


8. Rate the current NPPO's current human resources capacity in terms of qualifications and skills
Very Weak
Weak
Average
Good
Very Strong
No response
20%
40%
30%
10%

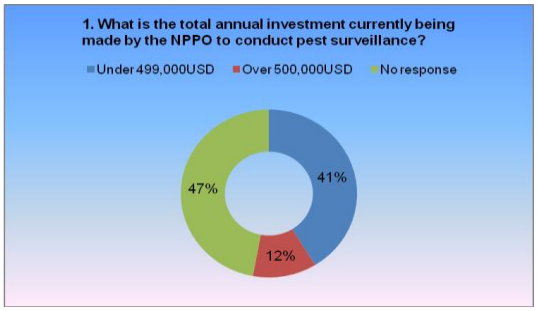

9. Are those human resources sufficient to carry out the activities according to the NPPO's requirements for pest surveillance?
Not at all
insufficient
With Difficulty
Almost
Completely
No response
10%
10%
80%

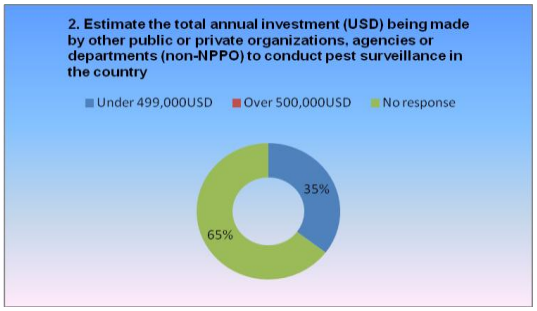

10. Who pays for the specific surveys to be conducted?
Government
Variable- mostly government
Variable-mostly private sector
Private sector
Other
No response
30%
70%

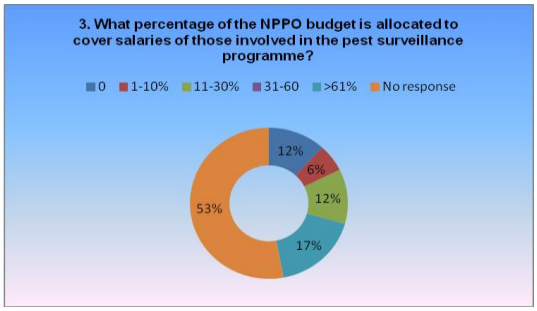

11. What proportion of the staff assigned to carry out pest surveillance have been specifically trained to do so?
None
25%
50%
75%
All
No response
20%
20%
10%
50%

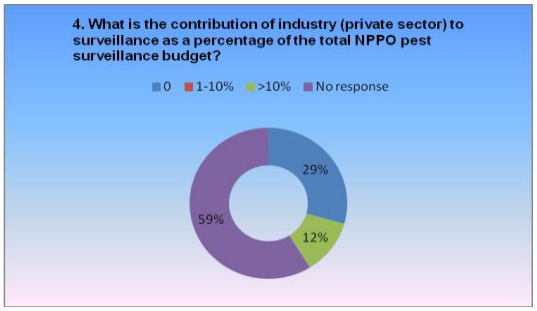

12. How frequent are training programs for staff involved in pest surveillance?
No programmed training
Once every 5 years
Once every 3 years
Once every 2 years
At least once per year
No response
40%
10%
50%

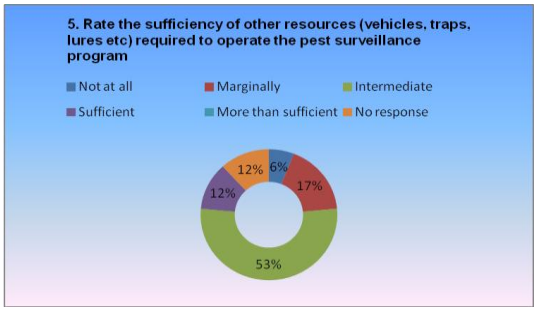
Eastern Europe and Central Asia: resources

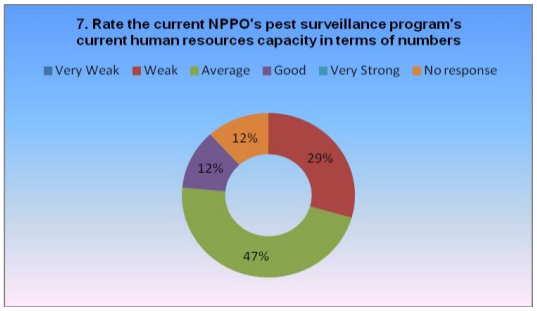


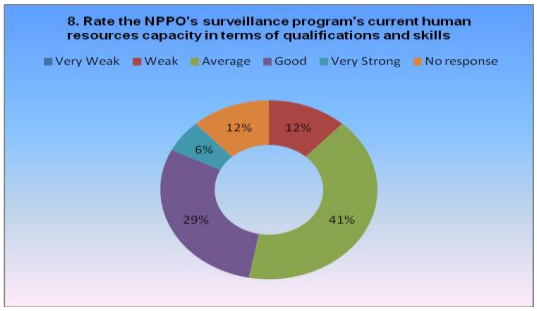


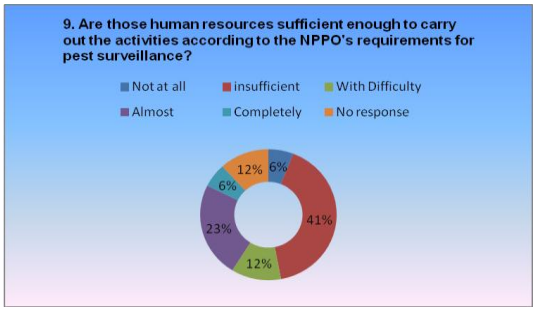


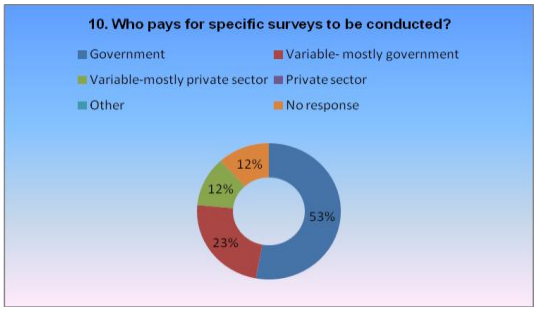


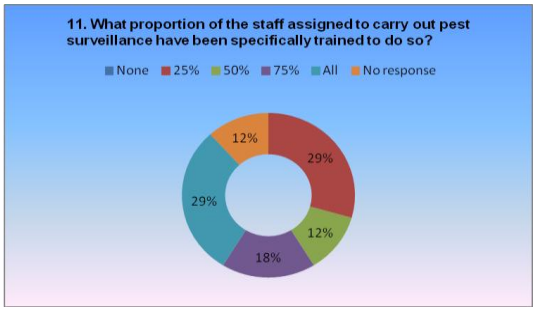


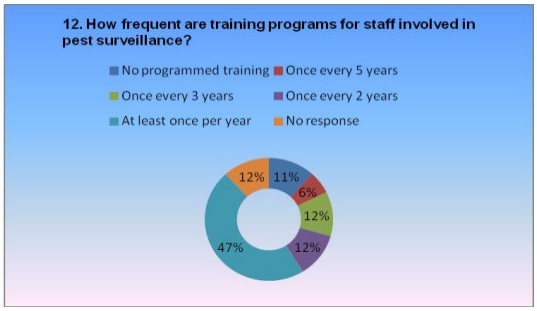




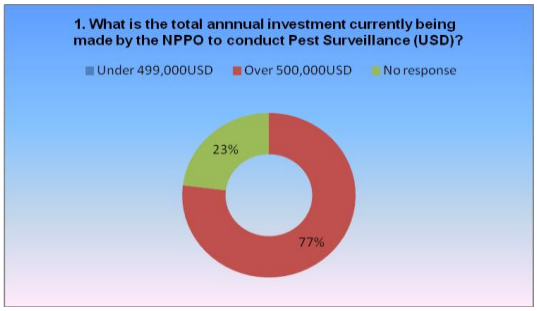


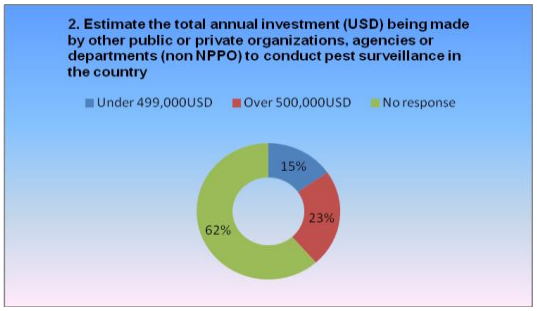


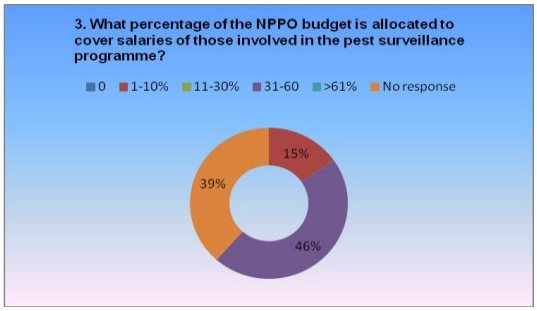


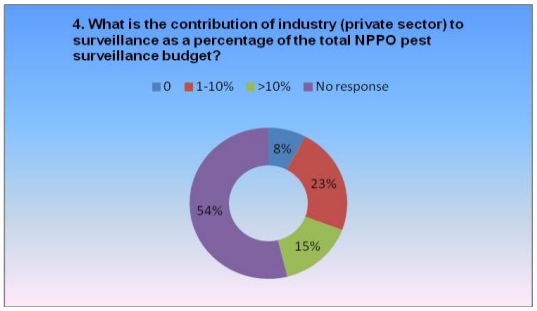


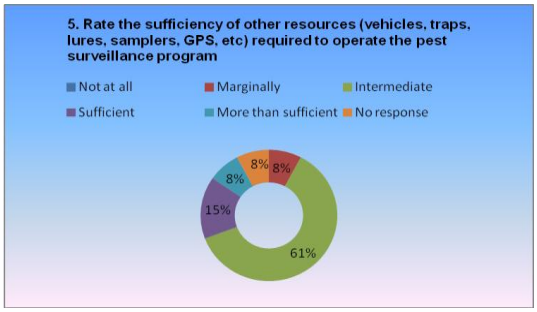
Latin America: resources

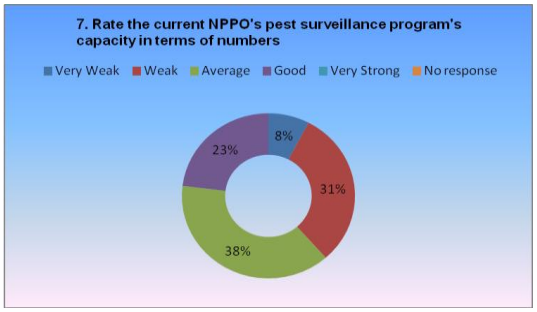


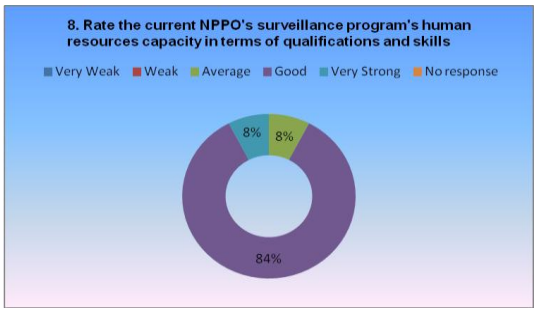


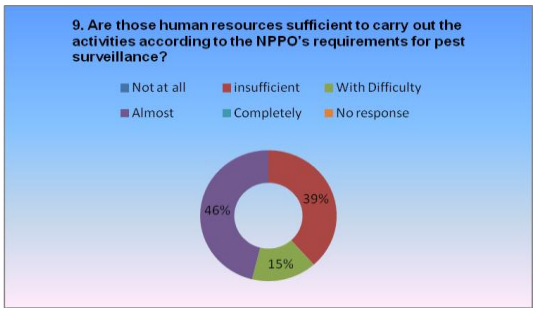


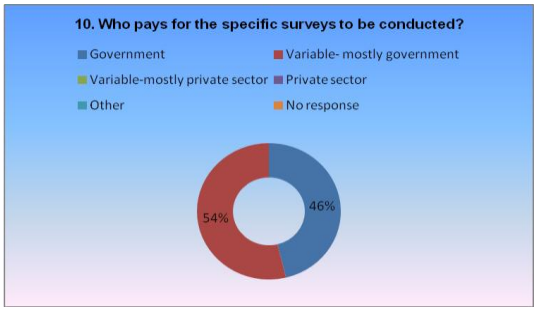


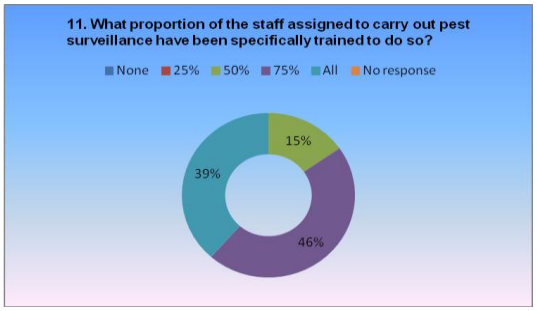


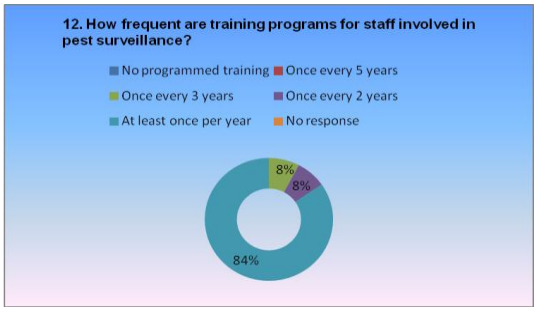




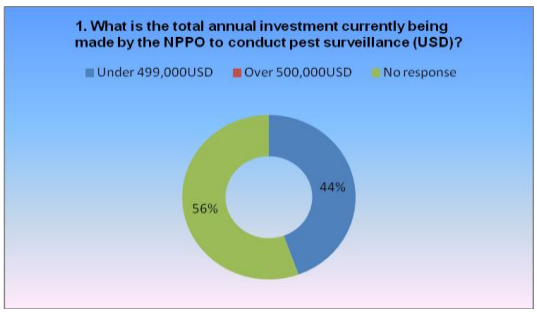


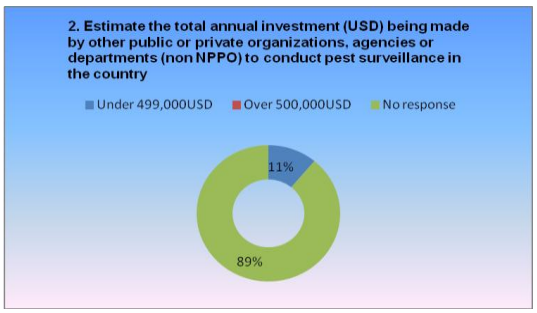


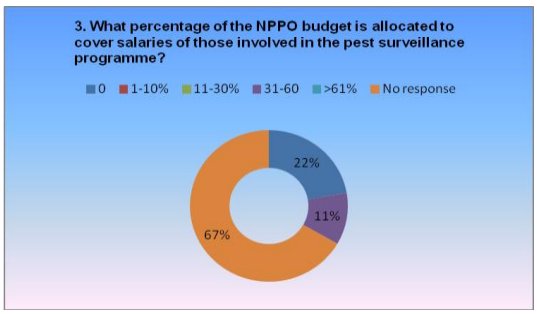


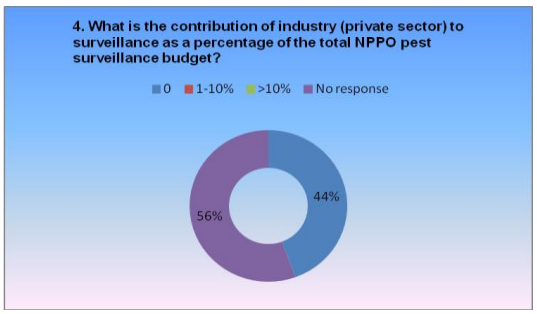


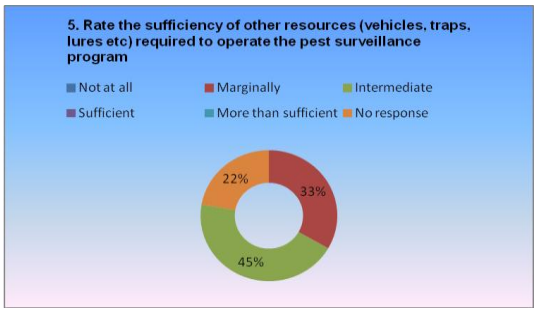
Near East: resources

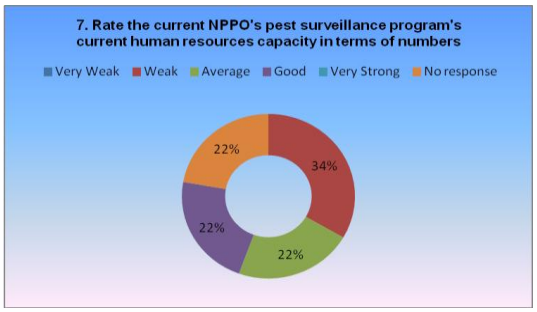


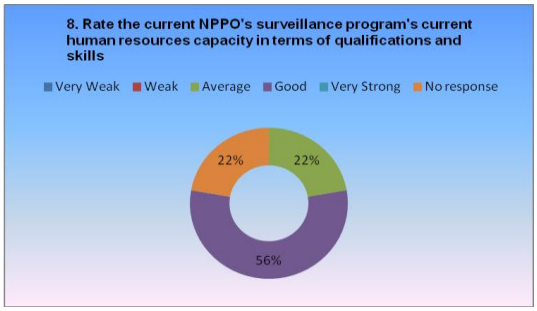


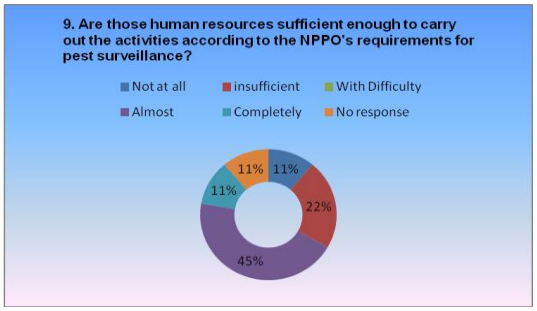


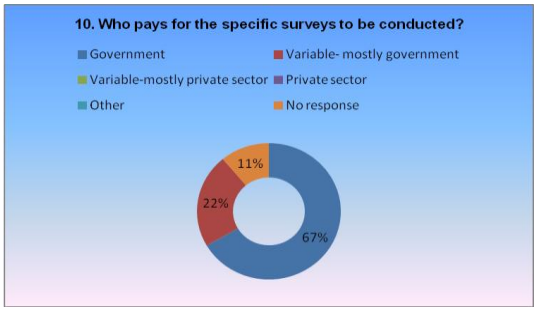


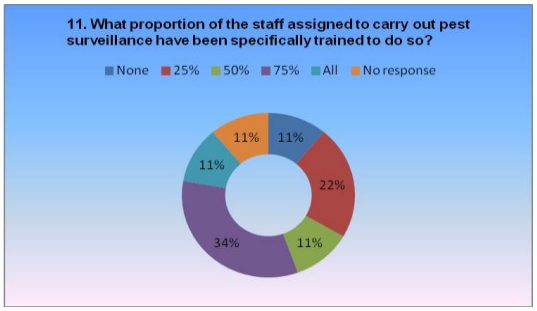


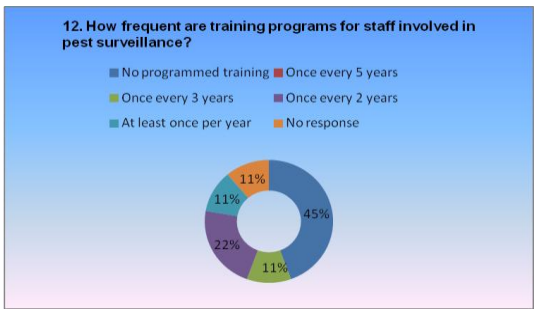




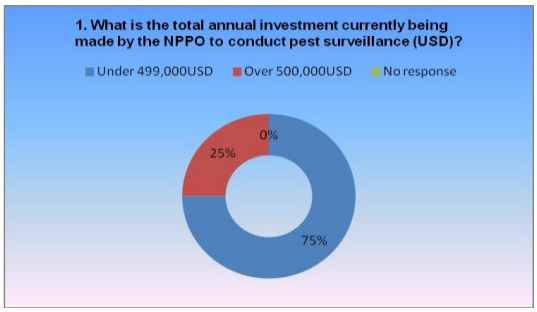


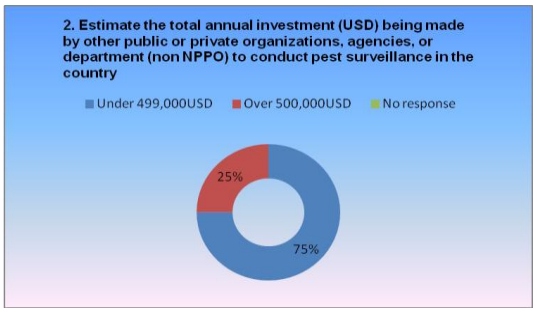


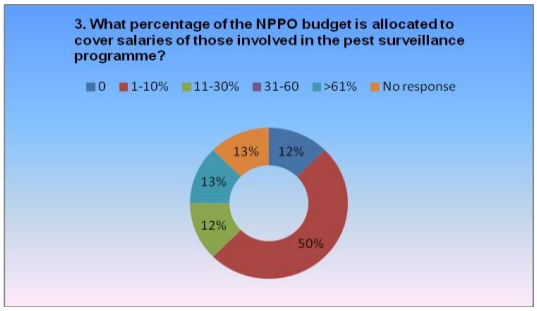


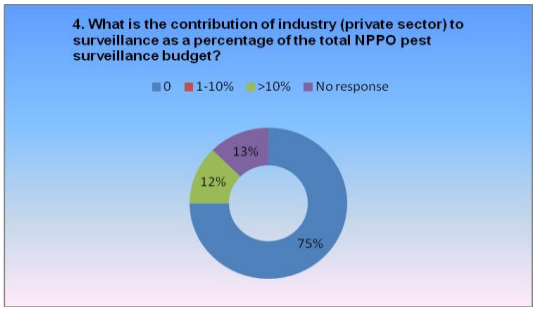


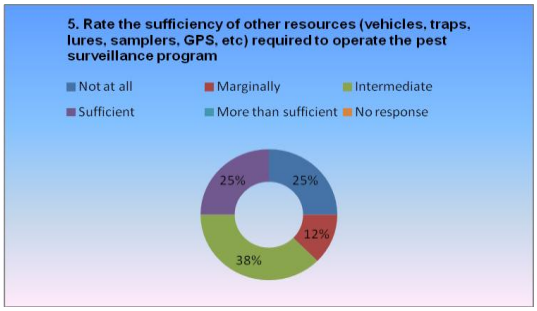
Southwest Pacific: resources

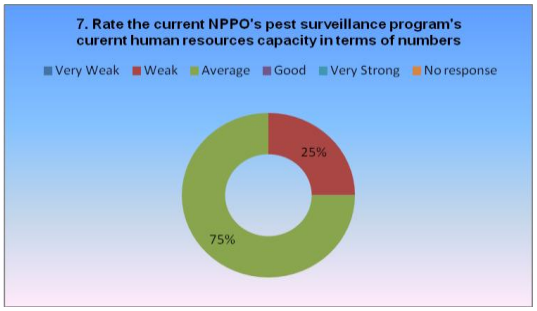


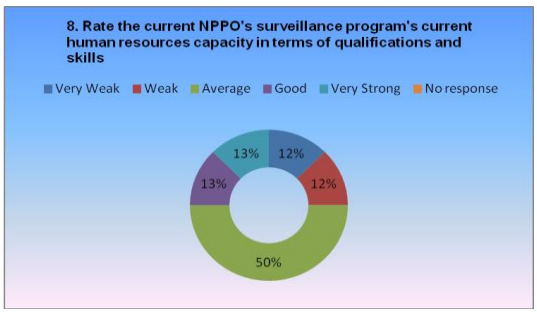


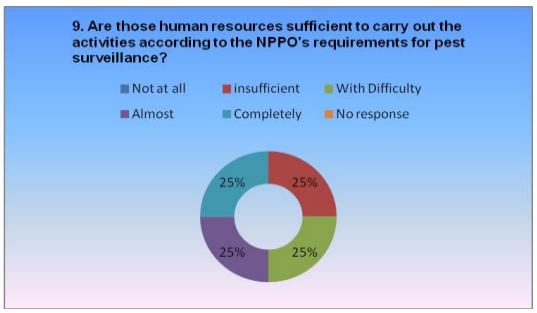

3. What percentage of the NPPO budget is allocated to cover salaries of those involved in the pest surveillance programme?
0
1-10%
11-30%
31-60
>61%
No response
12%
50%
12%
13%
13%

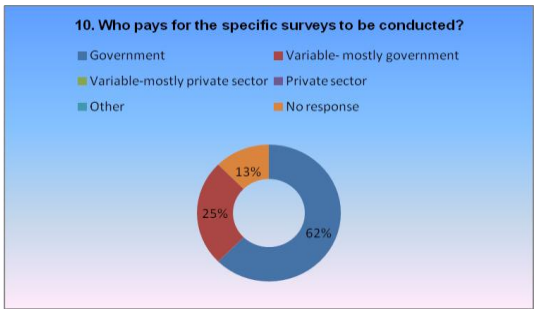

4. What is the contribution of industry (private sector) to surveillance as a percentage of the total NPPO pest surveillance budget?
0
1-10%
>10%
No response
75%
12%
13%

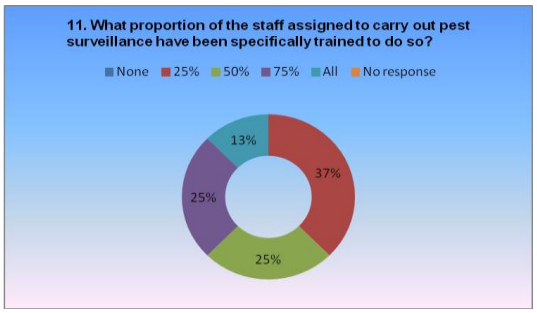

5. Rate the sufficiency of other resources (vehicles, traps, lures, samplers, GPS, etc) required to operate the pest surveillance program
Not at all
Marginally
Intermediate
Sufficient
More than sufficient
No response
25%
25%
12%
38%

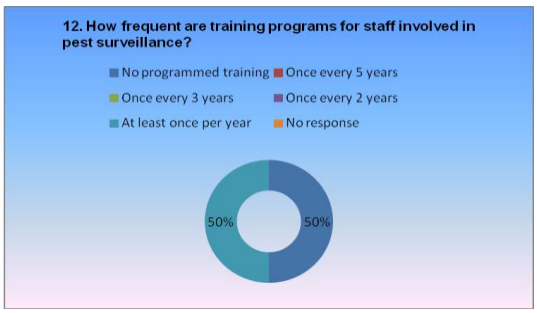

7. Rate the current NPPO's pest surveillance program's curernt human resources capacity in terms of numbers
Very Weak
Weak
Average
Good
Very Strong
No response
25%
75%


8. Rate the current NPPO's surveillance program's current human resources capacity in terms of qualifications and skills
Very Weak
Weak
Average
Good
Very Strong
No response
13%
12%
13%
12%
50%


9. Are those human resources sufficient to carry out the activities according to the NPPO's requirements for pest surveillance?
Not at all
insufficient
With Difficulty
Almost
Completely
No response
25%
25%
25%
25%


10. Who pays for the specific surveys to be conducted?
Government
Variable- mostly government
Variable-mostly private sector
Private sector
Other
No response
13%
25%
62%


11. What proportion of the staff assigned to carry out pest surveillance have been specifically trained to do so?
None
25%
50%
75%
All
No response
13%
37%
25%
25%


12. How frequent are training programs for staff involved in pest surveillance?
No programmed training
Once every 5 years
Once every 3 years
Once every 2 years
At least once per year
No response
50%
50%

Annex 1. Best Practices by Region

*Best Practices from IPPC Contact Points – Compiled by FAO Regional Workshop Organizers

EASTERN EUROPE & CENTRAL ASIA

ARMENIA

ФИО:	Никоян Артур
Организация:	Государственная служба по безопасности пищевых продуктов /ГСБПП/ фитосанитарная служба Республики Армения
Адрес:	0051,|г .Ереван,Мамиконянц 39а
E-mail:	nikoyanartur@rambler.ru
Тел:	+374 10 297 213 служб., +374 94 55 45 85 моб.

Название деятельности:	Национальный досмотр территории Армения
Краткий обзор (250 слов):	В 2005 г. с целью усовершенствования фитасанитарного законодательства и согласования с требованиями МСФМ при содействии Мирового банка были проведены 2 семинара о роли международных соглашений при торговле и анализе фитосанитарного риска. Техническая помощь в фитосанитарной сфере была оказана в рамках программы Евросоюза в 2006-2007г.г. В рамках этой программы было разработано 12 проектов правовых актов согласно МСФМ, проведено 9 семинаров, в частности по МСФМ 6, 4 и 8, и по Европейским директивам ЕС. В 2006 году был принят закон о карантине растений, а затем в 2009 г. был дополнен и переименован в закон о фитосанитарии с целью усовершенствования согласно требований МСФМ, Конвенции МКЗР, Соглашения ВТО и директив Евросоюза. В рамках программы ООН/ЕС по развитию стран оказывается помощь проведение реформ в области фитосатарии в 2011-2012г.г
Укажите тип проведенного надзора, является ли он общим или направленным (напр., в	Общий надзор проводится в случае поступления сигналов от производителей о подозрении на присутствие вредных организмов. В настоящее время в Армении выявлены очаги 11 ограниченно распространенных карантинных организмов. Целенаправленное обследование проводится на выявление

отношении вредного организма, по товару/хозяину, выборочное или целевое обследование):	только некоторых, более важных для Армении, карантинных организмов, таких, как картофельная нематода филоксера, ожог плодовых, и картофельная моль.
Кратко изложите причины для принятия действий по надзору:	Такие культуры как картофель, виноград, абрикосы, яблоки и др. являются основными традиционными культурами дла Армении. В связи с тем, что в Армении присутствуют растения-хозяева вышеупомянутых карантинных организмов и наличие благоприятных климатических условий, службой были приняты решения для проведения целенаправленных обследований на выявления перечисленных карантинных организмов. Сравнивая фитосанитарный контроль, проводимый в других странах, существует неотложная необходимость расширить целенаправленный надзор на выявление других важных для культур Армении карантинных организмов. Основной причиной, ограничивающей проведение целенаправленных обследований на выявление других карантинных организмов являются отсутствие необходимых условий, таких как отсутствие средств передвижения и инструментов для инспектора, необходимых для прроведения контроля, необходимого лабораторного оборудования, обучения специалистов, методических указаний и служебных помещений.
Кратко изложите непосредственное преимущество, результат или итог действия по надзору:	В результате надзора территории, при выявлении жредителя, срочно внедряются фитосанитарные меры для уничтожения выявленных очагов карантинного организма или меры для предотвращения их распространения. Своевременное применение фитосанитарных мер позволяет получить более высокий и качественный урожай сельхоз. культур
Изложите в свободной форме пример случая передового опыта по применению фитосанитарного надзора в вашей стране:	
Законом по фитасаниатрии принятым в 2009 году в Армении было предусмотрено внедрение регистрации производителей, импортеров и других об'ектов, а также было принято решение для проведения анализа фитосанитарного риска, необходимого для пересмотра и создания перечня вредных карантинных организмов. Во второй половине 2011года были утверждены правила регистрации производителей, импортеров и др. об'ектов, и с анваря 2012 года начата их регистрация. Регистрация производителей обязует не менее одного раза в год проводить фитосанитарный надзор возделываемых культур, и в случае обнаружения карантинного организма своевременно внедрять фитосанитарные меры. Названия проверенных хозяйств и результаты проверок с указанием местоположения проверенных культур будут храниться в базе данных, что позволит, при необходимости, сделать отслеживание происхождения продукции и в	

случае обнаружения карантинного организма установить и уничтожить источник инфекции.

В 2011 году в Государственной службе безопасности продовольственных товаров был создан департамент по управлению рисками, который ответственен за управление рисками, одновременно создан Научный центр по оценке и анализу рисками (Государственная некоммерческая организация - ГНКО). Подготовлен проект руководства для проведения оценки и анализа фитосаниатрного риска, основанный на международных стандартах. Начата подготовка и обучение специалистов по проведению анализа фитосанитарного риска.

С 2011 года утверждена правительством Арменииии 40-часовая, ежегодная программа для обучения специалистов по проведению фитасанитарного контроля.

В 2007 году был издан и в 2011 году, в ограниченном количестве, был переиздан фитосанитарный 4-язычный словарь (армянский, русский, английский, французский),который получил положительную оценку МКЗР и ЕОКЗР. Это первое издание в рамках стран СНГ.

Если вы хотите предоставить ссылки или приложения к описанию случая передового опыта, пожалуйста, приведите их названия ниже:

1. [например, статья из новостей: Утопия успешно устранила основной очаг вредного организма *Pestifera majora*. Пищевые поставки бзопасны. Хроника Утопии, декабрь 12, 2018]

2. [например, статья из научного журнла]

3. [например, доклад НОКЗР]

4. [например, ссылка на веб-страницу]

5. [например, фотографии или другие медиа форматы]

…и т.д.

TAJIKISTAN

ФИО:	Бегов Нусратулло Гафорович
Организация:	Зам. начальника Службы Государственной инспекции по фитосанитарии и карантину растений Республики Таджикистан
Адрес:	г. Душанбе, ул. Шарк, 2-ой проезд, дом 10
E-mail:	tojikquarantine@gmail.com
Тел:	Тел: +992 907-71-00-35; тел. / факс: (+992 37) 224-04-16.

Название деятельности:	КАРАНТИН РАСТЕНИЙ
Краткий обзор :	Проведение государственного контроля за соблюдением установленных правил и осуществлением мероприятий по карантину растений при производстве, заготовке, транспортировке, хранении, переработке, реализации и использовании сельскохозяйственной и другой продукции растительного происхождения.
Укажите тип проведенного надзора, является ли он общим или направленным (напр., в отношении вредного организма, по товару/хозяину, выборочное или целевое обследование):	В Республике Таджикистан надзор является общим.
Кратко изложите причины для принятия действий по надзору:	Причинами для принятия действия по надзору являются проведение мероприятий по охране территории республики от проникновения из зарубежных стран карантинных и других опасных вредителей, болезней растений и сорняков, которые могут нанести значительный экономический ущерб народному хозяйству;
Кратко изложите непосредственное	Преимуществом по надзору является то, что специалистами карантинной Службы Таджикистана

преимущество, результат или итог действия по надзору:	принимаются меры по своевременному выявлению, организации локализации и ликвидация карантинных и других опасных вредителей, болезней растений и сорняков, а также предупреждение их проникновения в районы республики, где они отсутствуют;

Изложите в свободной форме пример случая передового опыта по применению фитосанитарного надзора в вашей стране:

Для целей надзора специалистами карантинной Службы Таджикистана изучаются литературные источники, такие как «Вредные организмы , имеющие карантинное значение для Европы» г.Москва, Колос, 1996 г., Справочник по вредителям, болезням растений и сорнякам, имеющим карантинное значение для территории Российской Федерации, г.Нижний Новгород, Арника, 1995 год, и другие литературные источники. Материалы по вопросам карантина растений систематически изучаются на вэб сайтах, организованном Европейской и Средиземноморской Организацией по карантину и защите растений (ЕОКЗР), на Международном Фитосанитарном Портале изучается информацию по вопросам карантина растений представленная более чем 170 государствами мира. Основные сайты мы изучаем таких государств как Российская Федерация, Республики Казахстан, Монголии, Афганистана, Узбекистана, Ирана и других стран мира. Также систематически мы изучаем материалы, размещенные на веб сайте Всероссийского Центра карантина растений.

Международные стандарты по фитосанитарным мерам (МСФМ) в количестве 32 переведенные на русский язык и размещенные на сайте ЕОКЗР , где стали доступными для изучения специалистами и государственными инспекторами по карантину растений Республики Таджикистан.

Кроме того, систематически изучаются региональные стандарты по карантину растений, диагностике вредных организмов и другая база данных, размещенные на сайте ЕОКЗР (на английском и русском языках)

Республика Таджикистан ежегодно расширяет международное сотрудничество со странами мира. Так, например, со странами заключены в установленным порядке соглашения в области карантина растений с Украиной, Ираном, Пакистаном, и др.

Все это вышеуказанное по нашему мнению является факторами передового опыта по применению фитосанитарного надзора в Республике Таджикистан.

Если вы хотите предоставить ссылки или приложения к описанию случая передового опыта, пожалуйста, приведите их названия ниже:

1. фотографии вредных организмов специалисты карантинной Службы Таджикистана изучают на сайтах

www.eppo.org, www.ippc.int

UKRAINE

ФИО:	Шакина Елена Викторовна
Организация:	Главная государственная инспекция по карантину растений Украины
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E-mail:	Lena-Shybanova@rambler.ru
Тел:	0445279346, 0958998082

Название деятельности:	Внутренний карантин растений
Краткий обзор (250 слов):	- охрана территории Украины от занесения регулируемых вредных организмов; - выявление, локализация и ликвидация регулируемых вредных организмов; - предотвращение проникновения регулируемых вредных организмов в зоны, свободные от таких регулируемых вредных организмов на территории Украины; - осуществление государственного контроля за соблюдением карантинного режима и проведением мероприятий по карантину растений при выращивании, хранении, заготовке, вывозе, ввозе, транспортировке, хранении, переработке, реализации и использовании объектов регуляции; - регистрация лиц, которые осуществляют хозяйственную деятельность, связанную с производством и обращением объектов регуляции
Укажите тип проведенного надзора, является ли он общим или направленным (напр., в отношении вредного организма, по товару/хозяину, выборочное или целевое обследование):	Ежегодные плановые контрольные обследования территории Украины на выявления возможных карантинных организмов, также проводятся внеплановые обследования территории или объектов при подозрении на присутствие, занесения, распространения вредного организма (скрытая зараженность при ввозе импортных грузов), в этом случае проводится выборочное или целевое обследование
Кратко изложите причины для принятия действий по надзору:	Предотвращение проникновения регулируемых вредных организмов в зоны, свободные от таких регулируемых вредных организмов на территории Украины, а при выявлении, локализация и ликвидация регулируемых вредных организмов в зоне обнаружения

Кратко изложите непосредственное преимущество, результат или итог действия по надзору:	Своевременность проведения фитосанитарных мероприятий то есть локализация и ликвидация обнаруженных вредных организмов, что снижает затраты на борьбу с вредным организмом которые могут возникнуть в случае его распрастранения.

Изложите в свободной форме пример случая передового опыта по применению фитосанитарного надзора в вашей стране:

В конце апреля 2010 року Государственной службой по карантину растений Украины впервые было выявленно карантинный организм – К*артофельную моль* (Phthrimaea operculella Zell.) в партиях томатов, которые поступили в Украину из Турецкой Республики и Сирийской Арабской Республики.

Согласно Международного стандарта по фитосанитарным мерам №13 «Руководство по нотификации о несоответствии и екстренном действии» Укрглавгоскарантином были подготовленны нотификации с соответствующими сопроводительными письмами и отправленны в Главное управление защиты и контроля Турецкой Республики, а также в Директорат защиты растений Сирийской Арабской Республики. В письмах указали, что в таких случаях национальные организации по карантину и защите растений (НОЗР) вышеуказанных стран нарушили Международный стандарт №12 «Руководство по фитосанитарным сертификатам» и фитосанитарные требования Украины. Никакой информации о принятых мерах или розъяснениях со стороны НОЗР Турции и Сирии украинская сторона не получила. В рамках двухсторонних договореностей между Турецкой и Украинской службами по карантину растений было принято решение о введении Украиной запрета на импорт пасленовых (картофель, томаты, баклажаны и перец) с Турции. Согласно рабочей программы, которая была предложена турецкой стороной, украинские специалисты осмотрели места производства, сортировки и упаковки томатов в провинциях Анталия и Измир в течении 4 дней.

При этом было осмотренно две теплицы с томатами где визуально виявлены как повреждения так и личинки томатной и картофельной молей - *Tuta absoluta, Phthorimaea operculella.* Учитывая вышеуказанное, было принято решение о размещении феромонных ловушек на которых через время были обнаружены бабочки *Tuta absoluta.*

Кроме этого, был осмотрен современный тепличный комплекс в провинции Анталия, где также были виявлены повреждения характерные для томатной и картофельной молей. Учитывая отдаленность от г. Анталия этого комплекса было принято решение исследовать бабочек, которые во время проверки находились в емкостях с феромонами. Соответствующие образцы были отправленны в лабораторію на диагностику для установления фитосанитарного состояния данного тепличного комплекса.

При осмотре мест сортировки и упаковки томатов, которые готовились для внутреннего использования в Турции украинскими експертами были отмечены многочисленные случаи повреждения томатов, которые отбраковывались, а также были выявлены поодинокие повреждения плодов подготовленых к окончательной упаковке.

Помимо этого, по требованию украинских експертов было проведено обследование теплиц с баклажанами (что не было предусмотрено программой визита), которые непосредственно граничат с исследуемыми теплицами. При этом визуально виявлены как повреждения, так и личинки томатной и картофельной молей *Tuta absoluta, Phthorimaea operculell*.

Также, были проведены обследования теплиц с сладким перцем, где виявлены характерные повреждения личинками молей, но самих личинок в живом состоянии не обнаружено. Зато, были подозрения на наявность в теплице табачной белокрылки - *Bemisia tabaci*.

Более того, по требованию украинских специалистов было осмотрено тепличное хозяйство, специализирующееся на виращивании рассады пасленовых культур. В теплицах даного хазяйства проводился мониторинг с помощью цветных, клейковых ловушек только на виявление трипсов и белокрылок. При выявлении украинскими специалистами повреждений рассады томатов минерами и молями было рекомендовано установить феромонные лопушки и на картофельную и томатную моли. Кроме этого, рекомендовали обратить внимание на систему контроля и сертификации посадочного материала, который выпускается с даных теплиц, так как он может быть первичным очагом заражения и тем самым распостраняться с даным посадочным материалом в другие тепличные хозяйства.

Выводы:

Турецкая и украинская сторони совместно признали, чтоо в Турции отсутствуют официально зарегестрированные зоны, свободные от *Tuta absoluta* та *Phthorimaea operculella*.

Турецкой службой по карантину растений было предложено принять следующие меры:

- при експортной инспекции поставок томатов, сладкого перца, баклажанов и картофеля (пасленовых) в Украину во время инспектирования будет отбираться 4 percent вместо стандартних 2 percent;

- инспектирование будет проводитисься двумя инспекторами вместо одного, как обычно;

- дельта феромонные ловушки *Tuta absoluta* і *Phthorimaea operculella* будут розвешиваться в местах сортировки и упаковки;

- усиленный отбор пасленовых культур для поставок в Украину;

- Турция начала научно-исследовательський проэкт по изучению новых возможностей в фумигации;

Если вы хотите предоставить ссылки или приложения к описанию случая передового опыта, пожалуйста, приведите их названия ниже:

UZBEKISTAN

Исх. №50-421-01-12 от 30.12.2011 года

Секретариат

МККЗР

Главная государственная инспекция по карантину растений Республики Узбекистан рассмотрев письмо Асситента Генерального Директора Регионального Представителя ФАО по Европе и Центральной Азии №REU/2011/516 от 28 ноября 2011 года сообщает, что карантинная служба Узбекистана проводит целенаправленную работу по применению фитосанитарного надзора в контексте МСФС №6 «Руководство по фитосанитарному надзору».

Так, например при использовании фитосанитарного надзора карантинная служба Республики Узбекистан тесно сотрудничает с Министерством сельского и водного хозяйства, Государственного Таможенного Комитета, Министерством внешнеэкономических связей, инвестиций и торговли, Министерства иностранных дел Республики Узбекистан.

При надзоре используются доступные литературные источники, Бюллетень ЕОКЗР и информация по вопросам карантина растений, размещенная на различных вэб сайтах в Интернете.

Диагностика вредных организмов проводится на основе применения региональных стандартов ЕОКЗР, методических инструкций, рекомендаций, утвержденных в установлденном порядке инспекцией «Узглавгоскарантина.

Хранение базы данных осуществляется на персональных компьютерах, компакт-дисках или в виде бумажных документов. Хранение коллекций карантинных вредых организмов осуществляется в Центральной карантинной лаборатории.

В настоящее в карантинной службе Республики Узбекистан работают 503 специалиста по карантину растений, имеется 43 пограничных пунктов по карантину растений(ППКР).

Финансовую поддержку карантинной службе из средств республиканского бюджета оказывает государство.

Отдельные подведомственные организации инспекции Узглавгоскарантина (Специализированные фумигационные отряды) осуществляют свою деятельность на основе полной самоокупаемости и финансируются за счет специальных средств, образуемых из поступлений за выполненные работы по обеззараживанию подкарантинных материалов.

Политическую поддержку карантинной службе Узбекистана оказывает Правительство Республики Узбекистан и Министерство иностранных дел Республики Узбекистан.

Приложение: Таблица по надзору в Республике Узбекистан – 2 стр.

И.О. начальника **Ф.Захидов**

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Название деятельности:	КАРАНТИН РАСТЕНИЙ
Краткий обзор :	Проведение государственного контроля за соблюдением установленных правил и осуществлением мероприятий по карантину растений при производстве, заготовке, транспортировке, хранении, переработке, реализации и использовании сельскохозяйственной и другой продукции растительного происхождения.
Укажите тип проведенного надзора, является ли он общим или направленным (напр., в отношении вредного организма, по товару/хозяину, выборочное или целевое обследование):	В Республике Узбекистане надзор является общим.
Кратко изложите причины для принятия действий по надзору:	Причинами для принятия действия по надзору являются проведение мероприятий по охране территории республики от проникновения из зарубежных стран карантинных и других опасных вредителей, болезней растений и сорняков, которые могут нанести значительный экономический ущерб народному хозяйству;
Кратко изложите непосредственное преимущество, результат или итог	Преимуществом по надзору является то, что специалистами карантинной службы Узбекистана принимаются меры по своевременному выявлению, организации локализации и ликвидация карантинных и других опасных вредителей, болезней растений и сорняков, а также предупреждение их

действия по надзору:	проникновения в районы республики, где они отсутствуют;

Изложите в свободной форме пример случая передового опыта по применению фитосанитарного надзора в вашей стране:

Для целей надзора специалистами карантинной службы Узбекистана изучаются литературные источники, такие как «Вредные организмы , имеющие карантинное значение для Европы» г.Москва, Колос, 1996 г., Справочник по вредителям, болезням растений и сорнякам, имеющим карантинное значение для территории Российской Федерации, г.Нижний Новгород, Арника, 1995 год, и другие литературные источники. Материалы по вопросам карантина растений систематически изучаются на вэб сайтах , организованном Европейской и Средиземноморской Организацией по карантину и защите растений (ЕОКЗР), на Международном Фитосанитарном Портале изучается информацию по вопросам карантина растений представленная более чем 170 государствами мира. Основные сайты мы изучаем таких государств как Российская Федерация , Республики Казахстан, Республики Кореи, Турции, Пакистана и других стран мира. Также систематически мы изучаем материалы размещенные на веб сайте Всероссийского Центра карантина растений.

Международные стандарты по фитосанитарным мерам (МСФМ) в количестве 32 переведеные на русский язык и размещеные на сайте ЕОКЗР , где стали доступными для изучения специалистами и государственными инспекторами по карантину растений Республики Узбекистан.

Кроме того, систематически изучаются региональные стандарты по карантину растений, диагностике вредных организмов и другая база данных, размещенные на сайте ЕОКЗР (на английском и русском языках)

Республика Узбекистан ежегодно расширяет международное сотрудничество со странами мира. Так, например, со странами СНГ заключено Соглашение о сотрудничестве в области карантина растений от 1992 года, заключены в установленным порядке соглашения в области карантина растений с Украиной, Ираном, Пакистаном, Вьетнамом.

Все это вышеуказанное по нашему мнению является факторами передового опыта по применению фитосанитарного надзора в Республике Узбекистан.

Если вы хотите предоставить ссылки или приложения к описанию случая передового опыта, пожалуйста, приведите их названия ниже:

1. [например, статья из новостей: Утопия успешно устранила основной очаг вредного организма *Pestifera majora*. Пищевые поставки бзопасны. Хроника Утопии, декабрь 12, 2018]

2. [например, статья из научного журнла] В своей деятельности специалисты используют статьи из журнала «Защита и карантин растений»(Россия) например, №2, 2011г, «Техасская корневая гниль» стр.26, №3 «Томатная минирующая моль» стр.40, №5 «Карантинная наука – от ЦКЛ до ВНИИКР», «Прошлое и настоящее карантинного обеззараживания» стр.37-40,№:6 «Особенности развитие и вредоносность ценхруса малоцветкового» стр 36, №4 «Аттрактанты для выявления средиземноморской плодовой мухи» стр. 43, «Выявление и диагностика семян карантинных сорных растений» стр. 45, «Оценка сортов картофеля на устойчивость к золотистой картофельной нематоде» стр.

47.

3. [например, доклад НОКЗР]

4. [например, ссылка на веб-страницу] www.ippc.int, www.eppo.org, www.fsvps.ru, www.minagri.kz. , www.vniikr.ru

5. фотографии вредных организмов специалисты карантинной службы Узбекистана изучают на сайтах

www.eppo.org, www.ippc.int

BELARUS

ФИО:	
Организация:	ГУ «Главная госинспекция по карантину, семеноводству и защите растений»
Адрес:	Республика Беларусь, г.Минск, ул.Краснозвездная, д.8
E-mail:	rasten@tut.by
Тел:	+37517 288-24-57

Название деятельности:	
Краткий обзор (250 слов):	
Укажите тип проведенного надзора, является ли он общим или направленным (напр., в отношении вредного организма, по товару/хозяину, выборочное или целевое обследование):	Направленный в отношении вредного организма (томатная минирующая моль – Tuta absoluta)
Кратко изложите причины для принятия действий по надзору:	Включена в Перечень карантинных объектов в 2010 году
Кратко изложите непосредственное преимущество, результат или итог действия по надзору:	В 2011 году проводилось обследование тепличных хозяйств с целью выявления карантинных организмов. В результате обследования была выявлена томатная минирующая моль – Tuta absoluta.
Изложите в свободной форме пример случая хорошей практики применения фитосанитарного надзора в вашей стране:	

Томатная моль в республике Беларусь выявлена в мае 2011г в Гомельском районе в КСУП «Брилево» в теплице на площади 3 га. О выявлении томатной моли были проинформированы Минсельхозпрод, Департамент ветеринарного и продовольственного надзора, областные комитеты по сельскому хозяйству, все облгосинспекции и тепличные хозяйства республики (33 хозяйства).

Кроме того, подготовлено и направлено письмо Минсельхозпрода об ограничении перемещения лиц для посещения тепличных хозяйств.

До всех специалистов карантинной экспертизы доведена методика диагностики томатной моли по гениталиям. Опубликована статья в газете «Белорусская Нива» «Опасный вредитель – томатная моль», проинформированы райсельхозпроды.

Мероприятия в закрытом грунте:

1. Наложение карантина растений на карантинную фитосанитарную зону.
2. При входе на территорию тепличного хозяйства вывешена табличка с надписью «Карантин!».
3. На входе в теплицу установлен тамбур санпропускник, имеется дезковрик, который пропитан экоцидом.
4. Непосредственно перед входом в теплицу установлена двойная штора.
5. Верх теплицы дополнительно зашторен сеткой.
6. В теплицах были развешены желтые клеевые ловушки (по всей площади теплицы были расставлены тазики с водой оборудованные подставкой для свечей) которые зажигались в ночное время и горели до рассвета.
7. Непосредственно за теплицами, но на огороженной территории КСУП «Брилево» была установлена печка для сжигания растительных остатков и поврежденных плодов томатов.
8. Кроме того, были вырыты котлованы на глубине 2-2,5м, где проводилось захоронение растительных остатков, минерального субстрата и поврежденных томатов.

   В результате было уничтожено 172 тонны поврежденных томатов.

Проведена и химическая обработка по вегетирующим растениям актарой под корень и фуфаноном по растениям.

После полного освобождения теплиц от растительных остатков проводилась химическая обработка пустых теплиц препаратом фастак 4л/га и БИ-58 1 л/га.

В теплице на площади 3 га были высажены не поражаемые томатной молью культуры: огурцы.

Очаг локализован и ликвидирован. Находится под постоянным контролем Госинспекции по карантину растений.

Если вы хотите предоставить ссылки или приложения к описанию случая хорошей практики, пожалуйста, приведите их названия ниже:

1. статья из новостей: Опасный вредитель – томатная моль. Л.В.Плешко, А.С.Романович. Белорусская Нива, №99, 04.06.2011.

2. статья из научного журнала: Томатная минирующая моль обнаружена в Беларуси. А.С.Романович. Защита и карантин растений, октябрь, 2011.

3. Разработаны Методические указания по выявлению, диагностике, локализации и

ликвидации томатной минирующей моли - *Tuta absoluta.* С.В.Сорока, Д.А.Долматов и др., - Минск, Институт защиты растений, 2011.

4. Плакат-листовка по томатной минирующей моли «Внимание, карантин!!!»

5.

…и т.д.

NEAR EAST REGION

PALESTINE

Name:	ABDALLAH HASAN DAHLEH
Organization:	Plant Protection & Inspections Services / Palestinian MoA
Address:	Ministry of Agriculture / Nablus St /Al Bereh/ Palestine
Email:	abdalladahla@yahoo.com, or abdalladahlah@gmail.com
Tel:	00970 599313984

Title of activity:	
Abstract (250 words):	COMPARISON OF THREE TRAPS FOR OLIVE FRUIT FLY (*BACTROCERA OLEAE*) MONITORING AND MASS TRAPPING IN PALESTINE Mass trapping has proven to be a powerful weapon in the control of *Bactrocera oleae*, and its application in Mediterranean countries has currently increased notably as a control method. Three trap types were used to study the population and flight activity of the olive fruit fly in Palestine, and tested to determine their relative efficiency in monitoring and Mass trapping the olive fruit fly at ten sites in Palestine. The results of this study show that, despite the larger number of insects per one Frutiect trap, there were no significant differences in mass trapping among the three trap types per donum, when using 6 frutiect traps per donum, 15 traps of yellow sticky traps per donum, and 15 home made yellow sticky traps. During the session 2009 yellow sticky traps showed a significantly greater number of insects were captured per donum. Changes in trap efficiency over time, and between locations are discussed as well as the implications of these findings for monitoring programmes. This study showed five periods of Olive Fly flight activity. The first small peak was between mid-March and mid-April The second peak was between mid-June and early July. The third peak between early-August and early-September, the fourth peak between end-October and mid-November.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	Specific survey for population of olive fruit fly.

Summarize the reason for taking the surveillance action:	Identification population of Olive Fruit Fly in relation to region, season, availability of fruits and environmental conditions in Palestine.
Summarize the immediate benefit, result or outcome of the surveillance action:	Population peaks of olive fruit fly in Palestine were obtained that affected control measures in Palestine

Provide a narrative of your country's best practice in pest surveillance case:

[Start Narrative here – maximum of 3 pages]

منحنيات الطيران لذبابة ثمار الزيتون في السنوات 2008، 2009، 2010 في فلسطين :

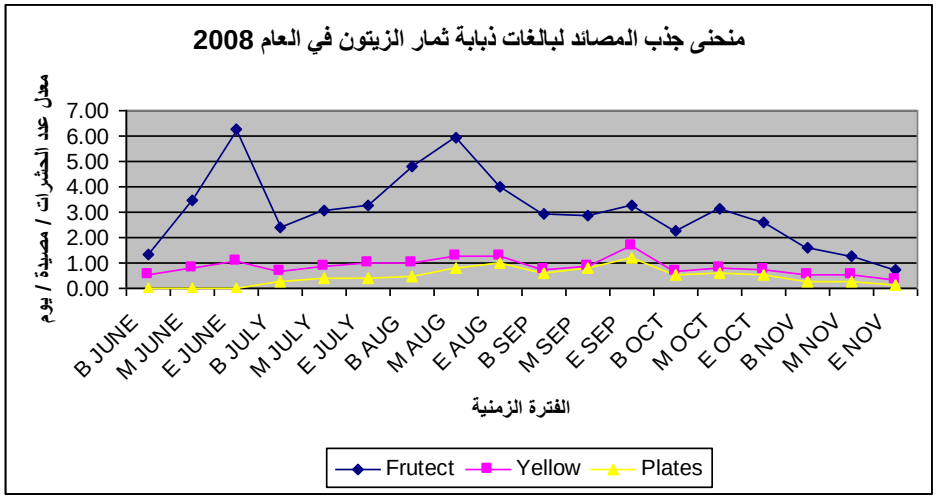
تم اعتماد مصيدة الفروتكت لدراسة منحنيات الطيران وذروة الجذب لذبابة ثمار الزيتون كونها تحتوي على اربع عناصر لجذب ذبابة الزيتون وهي اللون الأصفر واللون البني المحمر والشكل الكروي ومادة البومينال الغذائية مقابل عنصر واحد للنوعين الآخرين من المصائد وهو اللون الأصفر.

وقد تم تسجيل عدد بالغات ذبابة ثمار الزيتون ثلا ث مرات في الشهر، في بداية الشهر وفي منتصفه وفي نهايته ، وتم احتساب معدل عدد الحشرات على اساس المعادلة التالية :

معدل عدد الحشرات = مجموع عدد الحشرات على المصائد/ عدد المصائد * عدد أيام الجذب .

في العام 2008 سجل منحنى جذب المصائد لبالغات ذبابة ثمار الزيتون وجود أربع قمم جذب، تمثل ذروات الطيران .

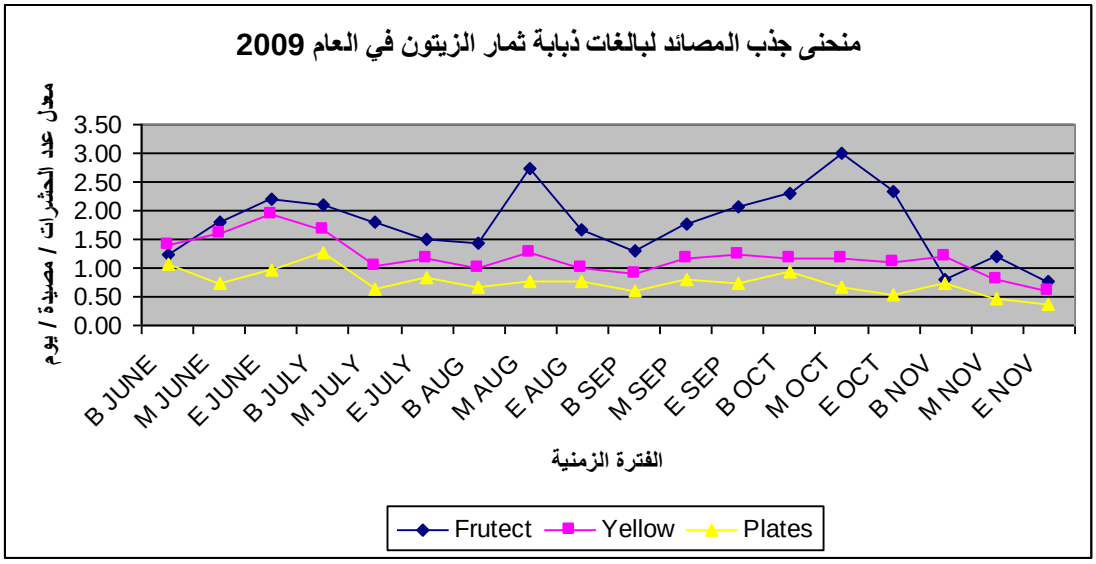
يبين الشكل رقم (8) منحنيات جذب المصائد لبالغات ذبابة ثمار الزيتون خلال العام 2008 حيث يتضح وجود 4 ذروات جذب لبالغات ذبابة ثمار الزيتون في الفترة من بداية شهر حزيران وحتى نهاية شهر تشرين ثاني، خلال شهر حزيران لوحظ ارتفاع في عدد بالغات ذبابة ثمار الزيتون على المصائد، وهي تمثل الجيل الأول للحشرة والذي تطور في الثمار التي باتت على الأشجار أو على الأرض من العام السابق(فيكتوريا وآخرون 2006)، وتعتبر بالغات هذ الجيل عذراء ولا تتكاثر جنسيا ولا تنجذب للمصائد الفرمونية الجنسية نتيجة عدم وجود الثمار المناسبة لوضع البيض، وهذا ما انعكس على الإنخفاض النسبي لأعداد الحشرة خلال شهر تموز رغم عدم التغير في درجات الحرارة والرطوبة (تسجيل درجات الحرارة والرطوبة مع أخذ قراءات المصائد)، وعندما أصبحت ثمار الموسم الجديد بالحجم المناسب لوضع البيض من اناث ذبابة ثمار الزيتون، بدأ النشاط الجنسي للحشرة، حيث لوحظ منحنى جديد في أعداد الحشرة المنجذبة للمصائد خلال شهر آب وهو يمثل الجيل الثاني وقد تبعه ظهور منحنيين لأعداد الحشرة المنجذبة للمصائد والتي تمثل الجيلين الثالث والرابع خلال شهر أيلول نتيجة لتوفر العائل ودرجات الحرارة المناسبة لذلك حيث بلغت درجات الحرارة العظمي في معدلها بين 29-32 خلال هذين الشهرين (التسجيل الدوري لدرجات الحرارة أثناء الدراسة) .



الشكل رقم (8) : منحنيات جذب المصائد لبالغات ذبابة ثمار الزيتون خلال العام 2008 حيث يتضح وجود 4 ذروات جذب لبالغات ذبابة ثمار الزيتون في الفترة من بداية شهر حزيران وحتى نهاية شهر تشرين ثاني.

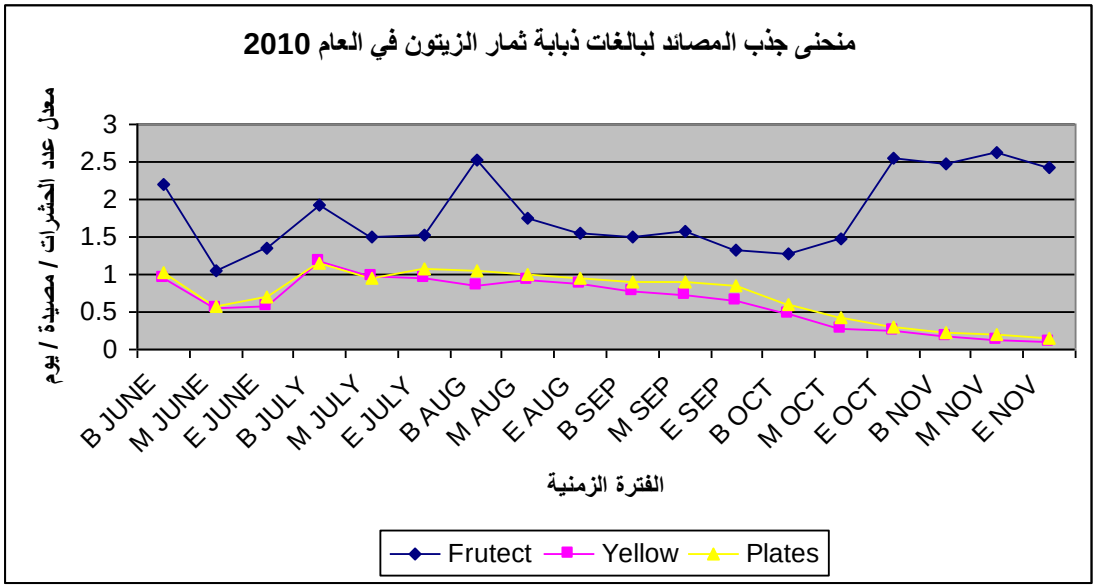
وقد سجل منحنى جذب المصائد لبالغات ذبابة ثمار الزيتون في العام 2009 وجود أربع قمم جذب، تمثل ذروات الطيران، فكانت قمة الجذب الأولى في نهاية شهر حزيران والقمة الثانية في نهاية شهر آب وقمة الجذب الثالثة في شهر تشرين أول حيث كان المنحنى في هذه

الفترة اعلى منحنى نتيجة توفر الثمار المناسبة لوضع البيض وتوفر درجات الحرارة المناسبة لتطورها،كما ظهر منحنى صغير في أعداد الحشرة في شهر تشرين الثاني.



الشكل رقم (9) منحنيات جذب المصائد لبالغات ذبابة ثمار الزيتون خلال العام 2009 حيث يتضح وجود 4 ذروات جذب لبالغات ذبابة ثمار الزيتون في الفترة من بداية شهر حزيران وحتى نهاية شهر تشرين ثاني.

وخلال الموسم الزراعي 2010 سجل وجود 3 قمم جذب لبالغات ذبابة ثمار الزيتون حيث كانت قمة الجذب الأولى خلال شهر تموز وقمة الجذب الثانية في منتصف شهر آب وقد لوحظ عدم وجود قمم جذب من نهاية شهر آب وحتى نهاية شهر تشرين أول، حيث ساد مناطق الضفة الغربية موجات حر متعاقبة طوال هذه الفترة تراوحت العظمى خلالها ما بين (32-37) درجة مئوية خلال فترات النهار(التسجيل الدوري لدرجات الحرارة أثناء الدراسة)، ثم ظهرت قمة الجذب الثالثة خلال هذا الموسم في بداية شهر تشرين الثاني عندما عادت درجات الحرارة الى وضعها الطبيعي حيث تراوحت العظمى خلال هذه الفترة بين (25 -27) درجة مئوية



الشكل رقم (10) منحنيات جذب المصائد لبالغات ذبابة ثمار الزيتون خلال العام 2010 حيث يتضح وجود 4 ذروات جذب لبالغات ذبابة ثمار الزيتون في الفترة من بداية شهر حزيران وحتى نهاية شهر تشرين ثاني.

المناقشة :

عند مقارنة انواع المصائد الثلاث في جذب بالغات ذبابة ثمار الزيتون على اساس المصيدة الواحدة تبين تفوق مصيدة الفروتكت في سنوات الدراسة الثلاثة كونها تحتوي على اربع عناصر جذب مقارنة بعنصر جذب واحد لكل من المصيدة الصفراء والمصيدة الصفراء اليدوية، فكان معدل جذب كل مصيدة طوال الموسم من مصائد الفروتكت، الصفراء والصفراء اليدوية في العام 2008 كما يلي (552 ،

154 ، 84) ذبابة ، وفي العام 2009 (320 ، 214 ، 135) ذبابة ، وفي العام 2010 (326، 130، 113) ذبابة على التوالي، إلا أن معدل جذب المصائد في الدونم والموزعة حسب توصيات الشركة المنتجة لمصيدة الفروتكت (6 مصائد / دونم) والبرامج الإرشادية المعتمدة في الضفة الغربية، لإستخدام المصائد الصفراء الملونة والمصائد الصفراء اليدوية الصنع (مصيدة / شجرة أو 15 مصيدة / دونم)، أظهر تقارب معدلات الجذب بالنسبة لمصيدة الفروتكت والمصيدة الصفراء في العامين 2008 و 2010 وتفوق للمصيدة الصفراء في معدلات الجذب على أساس الدونم خلال الموسم 2009 ، حيث كان مجموع الحشرات على مصائد الفروتكت والصفراء والصفراء اليدوية المعلقة في الدونم الواحد خلال الموسم 2008 كما يلي (3315، 2315، 1249) ذبابة على التوالي و خلال الموسم 2009 كان مجموع الحشرات لكل دونم كما يلي (1921، 3122، 2030) وفي الموسم 2010 كان مجموع الحشرات لكل دونم (1957، 1956، 1702) .

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

1. [e.g. News article: Utopia successfully averts major pest outbreak of *Pestifera majora*. Food supply safe. The Utopia Chronicle, December 12, 2018]
2. [e.g. Science journal article]
3. [e.g. NPPO report]
4. [e.g. Web link]
5. [e.g. photos or other media formats]

…Etc.

SUDAN

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Title of activity:	Surveillance of fruit flies in the Sudan
Abstract (250 words):	The detection of *Bactrocera zonata* in Egypt in 2003 initiated a regional FAO surveillance of the fruit fly to prevent its spread to other countries in the region. The stakeholders involved were plant quarantine officers, plant protection officers, horticultural crop farmers and fruit and vegetable exporters. The sources of useful information were the Agricultural Research Corporation insect collection, a book describing the insect fauna of the Sudan and Scientific Journal records. Management or dissemination of information was through pamphlets, field days and training of the different stakeholders. The method employed was pheromone trapping. Pest diagnostic support was sought from ARC and the British museum. Management and record keeping were the responsibility of the Plant Protection Directorate (PPD). Funds were sourced from FAO and the government and human resources were sourced from PPD, Extension Departments. The overall outcome (expected and unexpected) as a result of the detection surveys conducted: no PPF *B. zonata* was detected in all parts of the country surveyed. The phytosanitary measures enforced were use of cold treatment for orange imported from Egypt. The surveillance led to the detection of *B. invadens* widely distributed in the country. Since 2007, as a result the government invested US$400 000 in a country-wide project to control *B. invadens* using an IPM approach. The methods used were cultural practices, food baits and pheromone traps. The expected introduction of hot water treatment will open the market for mango exports.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	Specific surveillance for the detection of PFF
Summarize the reason for taking the surveillance action:	The detection of *Bactrocera zonata* in Egypt in 2003 initiated a regional FAO surveillance of the fruit fly to prevent its spread to other countries in the region.
Summarize the immediate benefit, result or outcome of the surveillance action:	

Provide a narrative of your country's best practice in pest surveillance case:

[Start Narrative here – maximum of 3 pages]

Bactrocera zonata was detected in Egypt in 2003. This initiated a regional FAO surveillance project to address the serious fruit fly problem and to prevent its spread to other countries in the region (TCP/RAB/2908).

Funds were provided for the following activities:

- Surveys of the fruit fly in mango producing states, i.e. Khartoum, Kassala, River Nile, Blue Nile, South Kordofan States and the Red Sea State where 90 percent of Sudan imports are through its ports.
- Training of government staff and farmers for surveillance activities
- Printing and distribution of pamphlets
- FAO provided traps and the pheromone methyl Eugenol

The surveillance activities were executed by the Plant Protection Directorate.
During ten training workshops, 450 officers and farmers were trained for surveillance activities. The trainees were from plant protection, plant quarantine, agricultural extension, customs, farmers and other Ministry of Agriculture officers.

- traps and pheromones were distributed
- the stakeholders involved were plant quarantine officers, plant protection officers, extension officers, the Department of Horticultural, Fruit and Vegatable Farmers and fruit and vegetable exporters
- the sources of useful information were the Agricultural Research Corporation insect collection, a book describing the insect fauna of the Sudan and Scientific Journal records.

- The project was managed by the Plant Protection General Directorate and surveillance activities were executed by the PPD staff in the different States with other stakeholders, dissemination of information was executed at three levels: a) pamphlets and field days for farmers; b) training workshops; and c) awareness-raising at the different ports for plant quarantine and customs officers and travellers. Survey methods used were pheromone traps.

- Pest diagnostic support was provided by Agricultural Research Corporation, a new unknown fruit fly was detected and sent to the British museum for identification and identified as *Bactrocera invadens*.

- Record keeping was the responsibility of PPD.

- How it was resourced (Human, Financial, etc.) as described above, the detection of *B. invadens* prompted transfer of more national funds to the project and the intensity of the surveys was increased to delimit the distribution of the fruit fly. As a result of the detection Syria, Jordan, Egypt and Lebanon stopped mango imports from Sudan, mango exports dropped to 500 tonnes from 10 000 tonnes per year.

- The overall outcome (expected and unexpected)

  As a result of the detection surveys conducted, **no** PPF *B. zonata* were detected in all the parts of the country surveyed. The phytosanitay measures enforced were use of cold treatment for orange imported from Egypt. The surveillance led to the detection of *B. invadens* widely distributed throughout the country. As a result, since 2007, the government has invested US$400 000 in a country-wide project to control *B. invadens* using an IPM approach. The methods used were cultural practices, food baits, and pheromone traps. The expected introduction of hot water treatment will open the market for mango exports.

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4. [e.g. Web link]
5. [e.g. photos or other media formats]

…Etc.

SYRIA

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Tel:	00963-955256326

Title of activity:	Biological control section
Abstract (250 words):	I work in the plant protection directorate as Head of the biological control section, I have a Masters degree in biological control. I am a specialist in pest control – predators
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	I have to look after the centres for rearing the natural enemies in Syria, providing them with the updated protocols regarding rearing, controlling and releasing the natural pest enemies into the fields.
Summarize the reason for taking the surveillance action:	To control pests using the natural enemies.
Summarize the immediate benefit, result or outcome of the surveillance action:	We could make a survey of the most important pests on the main crops, so that we have isolated the local natural enemies and imported some of them to rear at the centres of rearing and breeding of the natural enemies. There are seven in seven provinces.

Provide a narrative of your country's best practice in pest surveillance case:

[Start Narrative here – maximum of 3 pages]

Farmers have increased the cultivated land area and achieved a surplus in their production of vegetables and fruit.

Farmers have relied on chemical pesticides for plant protection; even though they complain about the inefficiency of chemicals to solve their production problems, and the high cost of these pesticide applications. IPM programmes are now applied to protect agricultural productions (fruit, vegetables). Safe methods are used to obtain good productions free of pesticides residue.

Objectives

We use IPM programmes to:

- increase the farmers' profit
- reduce the use of pesticides
- meet consumer demand for healthy fruit and vegetables
- meet export requirements
- reduce environmental and health risks

Numerous pests and diseases are damaging vegetables and fruit-tree crops. According to year, site and climatic conditions, some pests and diseases have attained very high levels of infestation.

IPM in greenhouses (in protected areas)

Whitefly, leaf miner, Lepidopterist larvae, mites, Root knot nematodes, Vascular wilt, Early and late blights, Grey mould, viruses are the most harmful pests and diseases in greenhouses (in protected areas).

The IPM programme will include the following components:

- Insect-proof net will be recommended to avoid TYLCV infection and to protect crops from whitefly (*Bemisia tabaci*).
- Soil solarization will be suggested to control soil-borne pests and pathogens, as an alternative to fumigation with methyl bromide.
- Resistant rootstocks will be suggested to use for controlling root-knot nematodes and soil-borne pathogens.
- Tolerant and resistant vegetable cultivars will be recommended to use for controlling diseases.
- *Trichoderma* spp. will be recommended to use for controlling soil-borne pathogens.
- Use of natural enemies, and other IPM components, will be suggested to control insects.
- Use of pheromone and colour traps will be suggested to monitor pests and for their control.
- The number and the time of application will be fixed in a detailed plan.

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

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4. [e.g. Web link]
5. [e.g. photos or other media formats]

…Etc.

UNITED ARAB EMIRATES

Name:	Eng. Saeed Ali Bin Awash/Mr
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Tel:	00971 42148307

Title of activity:	
Abstract (250 words):	The United Arab Emirates (UAE) has a total population of 40 million date palm trees distributed throughout the country. The first detection of red palm weevil was recorded in 1985. Since that time the infestation widened until this pest became the first to threaten the date palm trees. Therefore, the government took steps to combat this devastating insect using different means of control. As the insect feeds inside the palm trunk, control has been quite difficult. Early detection is rather difficult and early infestation cannot be discovered until damage has taken place. The major control measures used relied on the irrational use of chemical insecticides. Recently, biological control has becoming more important as modern agriculture is shifting from reliance on synthetic organic pesticides in favour of integrated pest management. During a second stage of control the UAE started to apply an IPM strategy by using food-baited pheromone traps for the purpose of surveillance and trapping. Along with this IPM strategy, biological control agents, such as entomopathogenic fungi or entomopathogenic nematodes, were developed in Ras Alkhaima laboratories in coordination with the Arab Organization for Agricultural Development (AOAD).
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	General surveillance was conducted for fruit and vegetable crops. Specific surveillance was conducted for red palm weevil.
Summarize the reason for taking the surveillance action:	• To combat red palm weevil; • To reduce pest population and to bring the losses to the minimum.
Summarize the immediate benefit, result or outcome of the surveillance action:	• Identifying the plan to control RPW and other plant pests.
Provide a narrative of your country's best practice in pest surveillance case:	
[Start Narrative here – maximum of 3 pages] ➢ Personnel involved in general surveillance were well trained in: • Plant protection • Data collection and analysis • Pest management. • Sampling methods	

- Preservation
- Transportation of samples for identification
- Record keeping associated with samples.

➢ Trainees were supplied with appropriate equipment and supplies.

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

http://moew.gov.ae/portal/default.aspx

1. [e.g. News article: Utopia successfully averts major pest outbreak of *Pestifera majora*. Food supply safe. The Utopia Chronicle, December 12, 2018]
2. [e.g. Science journal article]
3. [e.g. NPPO report]
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5. [e.g. photos or other media formats]

…Etc.

QUATAR

12/12/2011 11:00 44207275 MOF PAGE 08

الاسم:	محمد قائد ناجي سعيد
المنظمة:	وزارة البيئة – إدارة الشؤون الزراعية – قسم وقاية النبات والحر الزراعي
العنوان:	دولة قطر – الدوحة ص.ب ١٠٦١٩
العنوان الإلكتروني:	Qatar_net2007@hotmail.com
الهاتف:	٥٥٥٥٧٤٥٥

عنوان النشاط:	
موجز (٢٥٠ كلمة):	أمكانية العمل على مسح وتصنيف أهم الآفات الحشرية بدولة قطر
تحديد نوع المراقبة التي أجريت سواء كانت عامة أو محددة (مثل: الآفات، السلع/العائل، مسح عشوائي أو بهدف محدد):	نوع المراقبة كانت على الآفات الحشرية بدولة قطر
	معرفة أهم الآفات الحشرية ذات الضرر وذلك لتطبيق إتفاقيات وقاية
تلخيص الفائدة المباشرة، أو نتيجة أو حصيلة إجراء المراقبة:	مازلنا بطور العمل بهذا المجال .

عرض سرد عن أفضل الممارسات في بلدكم في حالة مراقبة الآفات:

]بدء السرد هنا – الحد الأقصى ٣ صفحات]

تم استخدام المصائد الضوئية وذلك من أجل اصطياد الحشرات وبعد ذلك أمكانية تعريفها عن طريق كتب التصنيف المعمول بها في مجال عملنا والتي تم تعريفها من خلال الملحق (الجدول الأول التابع لهذا الجدول)

AFRICA

Uganda

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Title of activity:	Determining the pest status of rice in Uganda
Abstract (250 words):	With support from USAID/COMPETE, a Rice Pest surveillance exercise was conducted in Eastern, Central, Northern and Western Uganda, to come up with a Pests List for Rice. The pest list was to be uploaded into the East African Pest Information Committee (EAPIC) website, so as to facilitate trade through a harmonized Rice Pest Risk Analysis for East Africa. This initiative aimed to develop official, internet-accessible, country-specific and regional pest reporting methods, to support Sanitary and Phytosanitary requirements for East Africa. The objective of this exercise was to conduct **pest surveillance for priority crops** in the East African Region. To establish existing rice pests in the country, prominent rice farms were targeted, using a preliminary list of pests as a checklist. The preliminary list was a combination of pests listed in the CABI Crop Protection Compendium, 2007, from a review of available literature, discussions with scientists from National Crop Resources Research Institute-Namulonge (NaCRRI), rice farmers and district production staff. While in the field, suspected diseased rice plants, insects, and soil were collected and sent to the National Diagnostic Laboratory for proper identification. The list of pests and diseases on the checklist was later verified against pests and diseases collections from the field and listed.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	Commodity surveillance targeting general pest list for rice.
Summarize the reason for taking the surveillance action:	To establish existing rice pests in the country.
Summarize the immediate benefit, result or outcome of the surveillance action:	Pest status of rice documented to help harmonize phytosanitary measures for the movement of rice grain in the East Africa Region.

Provide a narrative of your country's best practice in pest surveillance case:

Stakeholder involved

- National research organization
- Farmers/producers,
- Laboratory diagnosticians
- Staff of National Plant protection Organization
- Extension staff of the local government

Sources of information

Crop Protection compendium

- Internet resources
- Country reports on rice
- JCA /FAO reports

- Unpublished field reports
- National rice development strategy reports
- Previous field reports on rice

Management/ dissemination of information

- Surveillance report was verified using the diagnostic laboratory
- The reported pest list fed into the East Africa Information Committee (EAPIC) portal

Electronic copies maintained in the NPPO and well as hard copies for further reference

Survey method

- General surveillance targeting rice as a commodity
- Site-specific surveys in the fields
- While on the farms, diseased rice plants, insects, and soil were collected and sent to the National Diagnostic Laboratory at Namalere for proper identification.

Pest diagnostic support

The verification of pest specimens was done at the Central MAAIF diagnostic Laboratory for pest identification.

Record keeping

The report including the list of pests on rice and other information was uploaded in the EAPIC portal, while the hard copy is kept in the MAAIF database repository.

Financing

The funds were sourced from USAID/COMPETE a project that supports safe grain trade in East and Southern Africa.

Challenges faced and how they were overcome

- The funds were not enough to cover all the rice-growing areas but the survey team made sure to select a representative sample of the rice-growing regions in the country. Further, collaboration with other stakeholders working on rice provided valuable support.
- Infrastructure challenges specifically were poor roads and ill-equipped diagnostic laboratory. To overcome the challenges, expert advice was sought from the university and well-established government laboratory.
- Technical personnel who are not well trained in disease/pest identification are still a challenge to date but collaboration with CABI, FERA and COPE would be of help.

The survey was supported by the government with in-kind contribution of vehicles, diagnostic facilities and computer facilities with internet connectivity.

The overall outcome of the survey is a pest list for rice including bacteria, fungi, insects, nematodes, etc. that help to carry out pest risk analysis and facilitation of trade.

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…Etc.

ASIA REGION

BANGLADESH

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Title of activity:	Conducting Surveillance on Minimizing Pest Risk in Rice
Abstract (250 words):	Rice is an important food grain in Bangladesh. Millions of people depend on rice as their staple food, but there are few skilled people involved in rice cultivation. However, rice cultivation is constrained because of stresses such as pest attack, natural disasters and so on; pest attacks are considered the most critical. For rice production to be sustainable an intensive surveillance is to be conducted in rice fields throughout the country with skilled labour working in DAE. Surveillance is important for forecasting and analysis based on earlier data and, at the same time, suggestions for precaution measures for rice cultivation. In case of severe attack operational guidelines are provided based on the surveillance report.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	Specific surveillance on rice pest.
Summarize the reason for taking the surveillance action:	Forecasting, early warning, etc.
Summarize the immediate benefit, result or outcome of the surveillance action:	At present generally 10-15 % rice production is constrained as a result of pest attack. After surveillance it may come down to 5-7 %.
Provide a narrative of your country's best practice in pest surveillance case:	
[Start Narrative here – maximum of 3 pages] • Selection of the representative surveillance block in each agricultural block comprises the total of five in each Upazilla (Subdistrict).	

- Selection of five units from each surveillance block, which measures 20 ha of rice field.
- Selection of surveillance plot using randomization from each unit measuring 0.2 ha. of land.
- Collection of data in every week of month during rice cultivation.
- Observation of 20 plants across the angular side of the rice field in respect of identification of the total number of pests and beneficial insects along with identifying the number infected or infested tillers and leaves.
- Conducting ten sweeps to identify harmful and beneficial insects.
- Total No. of surveillance blocks:
- No. of upazillas X No. of Surveillance block= 485 X 5 = 2425.

The primary data collected from the Surveillance Unit add in upazilla, from upazilla to district and district to headquarters and finally compiled for the concrete result for forecasting and other necessary actions.

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

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…Etc.

INDIA

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Title of activity:	Monitoring of Crop pests
Abstract (250 words):	Crop pest surveys are conducted to monitor the pest population on different crops in the country
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	General surveillance
Summarize the reason for taking the surveillance action:	In India the pest surveillance is being undertaken for the following purposes or reasons: • Monitor and forewarn of the crop pests, diseases, weeds, and bio-control agents population buildup in the agricultural crops. • Monitor the locust population in the Scheduled Desert Area (SDA) of Rajasthan and Gujarat States of India. • Know the occurrence of pests and provide a basis for pest identification, listing of pests, pest status, pest categorization, to conduct risk analysis and to earmark the pest-prone and pest-free areas as a pre-requisite for phyto-sanitory measures and agreement for global trade.
Summarize the immediate benefit, result or outcome of the surveillance action:	The surveillance programme was beneficial for: • Early detection of pest occurrence, outbreaks , upsurges in the country. • Making suitable pest management strategy before the pest causes economic losses. • Adopting timely pest management measures. • Earmarking the endemic, hot spots and pest free areas. • Making forewarning and issuing of timely advisory to farmers and State Governments. • Managing pest emergencies. • Knowing the emerging pest problems. • Timely decision making. • Checking further spread of the pest in the other areas. • Adopting pro-active steps for expected pest problems.
Provide a narrative of your country's best practice in pest surveillance case:	
In India crop pest surveillance is undertaken by the multiple agencies both at State and national level. Generally, the observations are taken manually and visually. The following surveillance activities are undertaken by various agencies:	

- Surveillance programmes may be national, and initiated by PPQS/PPD (such the National Integrated Fruit Fly Surveillance Project to monitor fruit fly in mango producing areas).
- The 31 Central IPM Centres (CIPMC) undertake regular roving pest surveys (as well as fixed plot surveys).
- Networks of scientists working for SAUs and ICAR crop specific research institutes also report pest occurrence periodically.
- The State Departments of Agriculture (SDA) are responsible for monitoring pests within the State.
- There are other rural kiosks and information movements (such as Kisan call centres), which could gather first-hand pest-related information, while IPM farmer field schools (FFSs) (which in some States are quite extensive) also encourage local pest surveillance.

THREE TIER PEST SURVEILLANCE AND ADVISORY SYSTEM IN INDIA

A three tier National Pest Surveillance and Advisory system was established in 2008 when the pest surveillance and advisory units were established at the national/states/district level. The composition and functions of these units is given below:

A. National Pest Surveillance and Advisory Unit

Composition

1. Joint Secretary (Plant Protection), DAC – Chairperson
2. ADG (PP), ICAR – Member
3. Plant Protection Advisor, Dte of PPQ & S – Member Convener
4. Director, NCIPM (ICAR) – Member
5. Representatives of crop-specific ICAR Institutions – Invited by the Committee from season and on area basis
6. Representatives of State Agriculture Universities – to be nominated by the Committee
7. Selected Commissioners/Director of Agriculture depending on the season and crop
8. Representatives of NIC
9. Representatives of farmers nominated by the unit

Functions

- Coordinating pest surveillance and providing guidance to the CIPMCs and States.
- Analysis of pest surveillance data and advice on emerging pest threats.
- Enabling the research Institutions for taking up special and time-bound activities in special areas.
- Launching campaign for creating farmer awareness on specific situations where community action is required.
- Advising the neighbouring States on possible pest migration.

B. State pest surveillance and advisory unit

Composition

- Commissioners/ Director, State Department of Agriculture - Chairperson
- Director of Research, State Agriculture University
- Representatives of Entomology and Plant Pathology, State Agriculture University
- Representatives of ICAR Research Institute in the State
- Selected District Joint Directors depending on crop season and area
- Representatives of CIPMC of the State
- Coordinator of KVK in the State
- Farmers representatives
- Selected NGO active in plant protection areas

- Joint Director/ Deputy Director (PP) - Member Convener

Functions

- Directing state-wide multi-district surveillance activities and managing the data.
- Arranging training of personnel and extendign support for district level surveillance.
- Analysing reports on the pest and disease situation in districts.
- Logging all issued advisories and ensuring advisories and other activities are consistent with guidance given.
- Confirming issuing of any State-wise advisories prepared by SAU, if needed.
- Arranging special surveys or surveillance depending on the need.

C. District Pest Surveillance and Advisory Unit

Composition

- Joint Director (Agriculture)
- Representatives of KVK
- Representatives of local research institute of SAU and/or ICAR
- Block Agriculture Officers depending on the season and crop
- Representatives of farmers groups
- Assistant Director/ Deputy Director (PP) - Member Convener

Functions

- Directing and coordinating local arrangements/activities on pest and disease surveillance and reviewing results and drafting appropriate advisories.
- Arranging to send the data to State and National units.
- Communicating the advisories to farmers using mass media and print media.
- Taking up special campaigns for surveillance and pest control practices.
- Involving farmer groups, commodity groups, NGOs in surveillance and special campaigns.

e-pest surveillance using hand held device

The different agencies are involved in pest surveillance for recording pest/disease intensity in different ways. E-Pest Surveillance consist of a hand-held device for adopting a uniform and standard Pest Surveillance Methodology throughout the country and to arrive at a common picture of the country or state or district as a whole.

Initially the technical input was given to FAO as well as the device developing software 'INFRONICS SYSTEMS' by the Dte of PPQ & S CIPMC, Hyderabad), ANGRAU, Rnagar Hyderabad , Department of Agriculture, AP and NCIPM New Delhi.

The hand-held device was developed and launched by Hon. Union Agriculture Minister on 26-02-08 at the national conference on Kharif 2008 at the National Agriculture & Science Centre, PUSA Complex New Delhi.

The specifics of the hand-held device are given below:

- The hand-held device is an important improved field data capture system (qualitative), quantitative with geo-referencing.
- The device has inbuilt Global Positioning System (GPS) so that geo-referenced field data can be collected.
- At the end of the pest surveillance the device generates a data file that can be easily transferred over the Internet to a centralized database at the NCIPM website for analysis and transferring data into usable report.
- The surveys were carried out by ANGRAU, Hyderabad Scientists, and Field staff of the Department of Agriculture, AP and Staff of CIPMC Hyderabad.
- The Pilot project on Evaluation of hand-held device for Pest Surveillance in AP conducted during Rabi 2007-2008 in four districts for crops.

Besides, the above e-surveillance devices the following two devices are also working in India for transmitting and storage of surveillance data.

- **dacnet/pdmis system** – for pest observations, at the district level; the system runs at state level and a subset of the data is also visible at the national level (crop, crop stage, pest, extent of disease/infestation); the source, and principal user, are the State departments of agriculture. The system is also used to manage pesticide availability
- **http://dacnet/iipm system** – supports entry of the results of roving survey reports, and includes the potential to report a more complete view with AgroEcosystem Analysis (additionally numbers of pests, predators, field conditions, weather, etc.) and is designed to administer CIPMC roving survey data

AWARENESS CUM SURVEILLANCE PROGRAMME AGAINST PEST OF SOYBEAN AND COTTON IN MAHARASTRA AND ORISSA

An awareness – cum – surveillance programme for management of major pests in soybean-cotton-based cropping system in Maharashtra (2009-2010) has been launched as the soybean crop suffered a setback due to an epidemic of *S. litura* and other pests, which caused heavy yield losses of up to Rs.1 000 crores. The programme consisted of two parts, i.e. i) awareness-creation and ii) pest-monitoring – cum surveillance-based advisory system. To achieve these objectives, the responsibilities were highlighted for all the stakeholders as per their areas of operation and specialization. The awareness-creation programme includes: Coordinator – Master Trainer – Field Staff-Elite farmers, while the pest-monitoring programme includes: Coordinator – Pest Monitor – data entry operator – Pest Scout.

The pest monitoring and advisory system includes recommendations for a number of pesticides to be used for the management of different soybean and cotton pests. NCIPM is instrumental in the launch of the programme in collaboration with the Government of Maharashtra.

A similar type of e-Pest Surveillance programme isbeing implemented in Orissa State for the rice crop. In this state the e-pest surveillance project/programme is funded under RKVY and is being implemented in 13 districts: Sundergarh, Sambalpur, Jharsuguda, Deogarh, Baragarh, Bolagir, Sonpur, Kalahandi, Nuapada, Koraput, Rayagada, Nawarangpur and Malkanagiri to carry out pest surveillance and monitoring in paddy. During the project period, paddy areas with endemic pockets of swarming caterpillar were given top priority for monitoring and surveillance by a **roving survey**.

There will be three to four rapid roving surveys done by officials of the department, i.e. OUAT, NCIPM, CIPMC and state agriculture department. The field diagnosis camps at one per each block to solve the day-to-day problem of farmers from soil health to pest control are being established. More emphasis is being given to control and management of swarming caterpillar using the spot application method.

In addition to this, pest **monitoring of all districts at directorate level** is being carried out by tele-conferencing and SMS-based programmes. Farmers can phone **0674-6530653** to inform the village under pest attack and this information is transferred to the concerned DDA/DAO/AAO/PPO at field level and DDA, PP/PPO at headquarter level by SMS for pest-monitoring and management.

VIDEO CONFERENCING AND CROP WEATHER WATCH GROUP MEETING (CWWGM)

The prevailing pest and disease situation in the country is also monitored and reviewed using video conferencing and crop weather watch group meetings (CWWGM) every Friday in DAC, New Delhi.

e-LOCUST

Indian Locust Warning Organization (LWO) is using the e-Locust system to monitor locust activities in Indian scheduled desert areas of Rajasthan and Gujarat States. This device, supplied by FAO, is an electronic data recording and transfer system, which facilitates rapid transmission of field information from far distances directly to the Locust Information Office of the national Locust Control Units (LCU) without delay and without using normal telecommunication facilities, or communicating field data orally by HF radios. E-Locust allows the Locust Control Officer in the field to enter observations and data directly into a database at each survey or control location and to view the data on a map. For this purpose a small palmtop computer is used in conjunction with GPS, a modem and HF radio equipment.

The objectives of the e-Locust system are to:

- improve data collection in the field;
- improve data transmission;
- facilitate data management at the Locust Information Office of the LCU.

Using this equipment it is possible to view the survey route at any time, the current location, or any aspect of data entered on a series of maps, which are displayed as overlaps on the palmtop computer.

The information stored can be directly transmitted by HF radio modem from the field to the RAMSES computer in

the Locust Information Office for analysis and further transmission by email to the SWARMS GIS of the DLIS Office at FAO HQ. This permits real time information of field conditions, ongoing activities in the field and better forecasts. The management of the LCU can directly follow the actual position of survey teams and redirect them as required. The data can also be uploaded to the RAMSES computer upon return to the Locust Information Office and consequently facilitates data management particularly in countries or situations with large amounts of data to be entered and processed for decision-making. This helps avoid errors while copying and re-entering data by hand and contributes to a better quality of the data.
If you wish to provide links or attachments in support of the best practice case provided please list their titles below:
1. [e.g. News article: Utopia successfully averts major pest outbreak of *Pestifera majora*. Food supply safe. The Utopia Chronicle, December 12, 2018] 2. [e.g. Science journal article] 3. [e.g. NPPO report] 4. [e.g. Web link] 5. [e.g. photos or other media formats] …Etc.

MYANMAR

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Title of activity:	Pest Surveillance in Rice Seed Production Field
Abstract (250 words):	Rice is essential not only for important starch-rich food for the community of Myanmar but is also farmers' main source of income. Based on the Development Millenniums Goals, eradication of poverty is the main task of the nation. Seventy percent of the people in Myanmar are engaged in the farm sector, so improvement of farmers' living standard will also fulfill another main objective of the nation. One of these objectives is the transfer of knowledge of high-yield varieties production to farmers. Seed production for high-yield varieties is carried out by a combined group of agriculturists having different specializations from all departments and enterprises under the Ministry of Agriculture and Irrigation in Yezin Agricultural University (YAU) rice farm. This best practice in pest surveillance was conducted at Yezin Agricultural University rice farm at Nay Pyi Taw in 2011. Seven doctors from the Department of Entomology at YAU were involved in this case. One light trap per acre was set from 20 DAS to 100 DAS and trapped insects were collected daily. Rice pests and predators were separated from trapped insects and were indentified in the YAU laboratory. Insects above the economic threshold level (ETL) were checked again with field scouting valves and these data were sent to the seed production group for control of these insects. Therefore the seed production programme has been successfully completed as a result of the good practice of pest surveillance. Furthermore insect lists of rice pests can be updated in Nay Pyi Taw area.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	This survey covered 100 acres of monsoon rice field at YAU farm, Nay Pyi Taw in 2011. Light traps for this survey were designed and made by YAU and specifically targeted rice pests.
Summarize the reason for taking the surveillance action:	The main reasons for this survey were to confirm the incidence and fluctuation of main rice pests and to monitor the new with pest visits.
Summarize the immediate benefit, result or outcome of the surveillance action:	The seed production programme has been successfully completed as a result of the good practice of pest surveillance. Furthermore, insect lists of rice pest can be updated in the Nay Pyi Taw area.
Provide a narrative of your country's best practice in pest surveillance case:	
[Start Narrative here – maximum of 3 pages] Rice is essential not only as an important starch-rich food for the community of Myanmar but is also farmers' main	

source of income. Farmers in Myanmar grow rice once a year and twice in some water-available areas. Based on the Millennium Development Goals, the main task of the nation is poverty eradication. Seventy percent of the people in Myanmar are engaged in the farm sector, promotion of farmers' living standard is to fulfill the main purpose of the nation; transfer of the knowledge of high-yield varieties production to the farmers is another factor. Seed production of high-yield varieties is carried out by a combined group of agriculturists having different specializations: i.e. Entomologist, Pathologist, Chemist, Plant Physiologist, etc. from all departments and enterprises under the Ministry of Agriculture and Irrigation at Yezin Agricultural University rice farm.

This best practice in pest surveillance activity was conducted at Yezin Agricultural University rice farm at Nay Pyi Taw in monsoon rice growing season, 2011 and the main reasons for this survey were to identify the incidence and fluctuation of the main rice pests and to monitor the new during pest visits. Seven doctors from the YAU Department of Entomology were involved in this case. Light trap monitoring method was used in this survey and these light traps were designed and made by YAU. One trap per acre was set from 20 DAS to 100 DAS on the field and trapped insects were collected daily. Rice pests were separated from trapped insects and indentified by these scientists in the laboratory of YAU. Insects above the economic threshold level were checked again in the field and these data were sent to the seed production group for control of these insects.

Normal rice pests such as thrips, rice hispa, yellow stem borer, brown plant hopper, green leaf hopper, leaf folder, case worm and ear bug, etc. were found as usual but there was 100 percent infection by whorl maggot (*Hydrellia philippina)* in the seedling stage in these new varieties. Moreover, five types of stem borer were captured in the light trap; pink stem borer, streak stem borer, dark headed stem borer, white stem borer and yellow stem borer. All data were recorded and saved by YAU. Security of the light trap and labour were the main challenges for this survey and substitution of the battery and increasing the labour force. All the operating expense were paid for by the seed production programme.

The seed production programme was successfully completed as a result of the good practice of pest surveillance and timely spraying. Furthermore, insect lists of rice pests can be updated in the Nay Pyi Taw area.

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

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4. [e.g. Web link]
5. [e.g. photos or other media formats]

…Etc.

NEPAL

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Title of activity:	Identification of the best practice
Abstract (250 words):	A surveillance technique was carried out on white grubs by the Plant Protection Directorate, Harihar Bhawan using light traps in Bhaktapur, District and Nuwawork of Nepal with the involvement of the District Agricultural Development Offices (DADOs). It was found that a funnel-shaped light trap used with a 125 W incandesant light was highly useful in trapping the beetles (Coleopteran insect) of the white grubs. The trapped population showed the highest number after the beginning of March and remained active until the end of June. After this, digging was carried out for sampling of the white grub larvae, when they were found in abundant numbers in June, based on information arising from beetle and larvae control techniques. The farmers may apply these tools in coordination with any of the suitable control methods.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	Monitoring and random sampling was adopted by the study, while doing so, the search was carried out for pest commodity, host (in cereal-based farming with maize-millet and minor vegetables). The survey was carried out purposefully as planned.
Summarize the reason for taking the surveillance action:	Over the years, white grubs have been a problem in Nepal and are widespread. Current farming practices have aggravated this problem to a large extent. The primary choice of the farmer is to use the highly toxic dust and granular form of chemical pesticides, even phoret as a means of controlling white grubs. The surveillance was primarily intended to observe the peak season of the beetle and larvae occurrences so as to plan for suitable control measures. Since last year, the Plant Protection Directorate (PPD) has produced *Metarhizium anisopliae* based biopesticide targeting this grub. The reason for choosing this novel option is to see if this product can be used in place of chemical pesticides in the white grub prone area. The information found in this study will be widely used in other Districts.
Summarize the immediate benefit, result or outcome of the surveillance action:	The current benefit of the study is to know the pest occurrence in terms of time, season, crop stage and its biology, which will help in adopting control measures. The second, but most important, advantage would be the reduced use of chemical pesticides, which will help in the production of safe and healthy food, which is the primary objective of the Nepal Government. The whole approach would focus on increasing the awareness of people to living organisms, etc.
Provide a narrative of your country's best practice in pest surveillance case:	
[Start Narrative here – maximum of 3 pages] In Nepal, monitoring, sampling and household surveys are the common methods of surveillance techniques in the attempt to control pest insects. Different pheromones, based on insect sex pheromones, lures, poison baits as well as light traps are used to monitor the different types of insects on different crops. Based on the severity of the insect and	

available options in the region, different types of monitoring tools are used.

In the case of the survey of white grubs, two approaches were primarily taken: control of the adults as well as larvae control. To control the adults, surveillance was carried out using light traps even though specific pheromones have been developed to monitor adults. Whereas, larvae can be found by simply digging with the hand held equipment in the farming area. Therefore, these two techniques are the primary means of surveillance in the country.

Linking Integrated Pest Management (IPM) to organic agriculture: a case study of Tharu Ethnic community in Nawalparasi District, Nepal

Yubak Dhoj, G.C., Ph.D.

Programme Director and National IPM Coordinator

Integrated pest management (IPM)

IPM is an interdisciplinary approach for reducing crop losses used by farmers, or with optimum mixes of pest control techniques. IPM combines the objectives of agricultural productivity, environmental sustainability and cost effectiveness. It has arisen out of the need to avoid the problems of pest resistance buildup (leading to pest resurgence), secondary pest outbreaks, human health problems, the high cost of pesticide control and environmental degradation caused by excessive and inappropriate chemical pesticide use. The approach is closely associated with enabling farmers to make crop protection decisions in full awareness of factors operating in their agro-ecosystems.

With its emphasis on making the best use of local and human resources, IPM encourages, wherever appropriate, the use of natural control mechanisms (for instance pest predators) and 'traditional' pest management techniques used by farmers. However, the adoption of practical alternatives to chemical methods of control may be more difficult to apply on farms than simple chemical control techniques. It is still difficult for Nepal, as the country has no chemical pesticides manufacturing industries and purchase of such compounds from abroad needs a lot of resources.

An understanding is required not only of the biology and ecology of the injury-causing agents (pest insects, pathogens and vertebrate pests), but also of all the possible effects of the various control measures on the particular farming system. Other factors that should be considered are the farmers' technical solutions, lack of resources, or socio-economic situation. IPM considers how a farmer would determine when to use each type of method. IPM is a pest control system that incorporates a variety of techniques to promote the best socio-economic and environmental conditions. For the effective adoption of the IPM, the technicians, pesticide handlers, farmers need to have a clear understanding of the concepts, approach, tools and practices and various extension methodologies. At the same time, each component of IPM such as biological monitoring, environmental monitoring, action and economic thresholds, choice of control methods should equally be considered, which may lead to organic production of the agricultural crops. Adoption of IPM tools and components, while producing organic vegetables, is largely critical for Nepal.

Present pest management differs from the orientation of controlto management, which is the origin of IPM. Recently pest management was viewed in relation to human behaviour and actions rather than pest killing or eradication. It means IPM places more emphasis on the holistic approach of pest management based on certain principles of pest management, whereas traditional methods were basically oriented to the use of chemical pesticides. There is still a lack of knowledge among the crop protection technicians involved in Governmental and non-governmental organizations of IPM practices, know how of the IPM tools, their application, etc. Therefore, any initiatives demonstrating their use have the objective of closing the knowledge gaps concerning the recent approach of IPM principals and practices with that of pesticide-orientated pest control in Nepal. In order to raise the awareness of producers and technicians as to organic production it is important to initiate activities such as the **organic village.** It is largely envisaged that these IPM activities could form the cornerstone of organic agriculture in Nepal.

Lessons learned

Farmer Field Schools (FFS) have becoming an important means of community learning, which should be upscaled for a wider area. Most organizations, however, have narrowly confined their use. In fact, FFS should not only be a platform for teaching a fixed curriculum, but should be used to exchange knowledge and practices between farmers. The environment for this should be informal for the well-being of the agro-ecosystem. In the case of Nepal, a couple of organizations have succeeded in raising awareness about the use of chemical pesticides, however, almost no progress has been made towards alternative means. Because of this situation, such schools are less and less

sustainable and there is almost neglible practice of alternative means of pest management by farming families. Simply said, such a school may just be a way to create a job for a certain group of people. In the majority of cases, farmer field schools disappear soon after the closure of the IPM programme. This is why they should be linked to profit, and this is where the organic approach could be included.

Also of importance is that FFS may be used as a platform to validate hypothesis and beliefs with that of improved technology, thus offering a better opportunity for practicing techniques, observation and analysis of profitability. This will help change farmers' attitudes. The so-called sophisticated research and associated costs could be significantly reduced. At the same time, blanket recommendation of IPM technology may be narrowed, which has been taken as a better outcome of the study. There is greater opportunity of producing selected agricultural commodities in specific locations from which the nation could significantly benefit. However, national programmes would need to be adopted and mandated to run these activitiies. Considering these aspects, the Plant Protection Directorate has been conducting some activities in this direction.

Future outlook

As the Plant Protection Directorate is primarily mandated for reducing crop loosess caused by various biotic and abiotic constraints, it has to be more proactive in changing the context nationally and internationally. To this end, it has recently completed its review programme throughout the country and has received feedback. Looking into its past strategies, it has built upon past achievements and focussed the programme on safer food production for selected commodities and stressed food production to feed its ever-growing population, while considering better environments. In consideration of these facts, a campaign has been launched to promote plant protection through the implementation of plant clinics, a pest database at the district, regional and national level. Monitoring of the available pesticides and their residues on the crop will discourage continuous use of chemical pesticides. Development of alternative technologies and compounds, such as biorational compounds (botanical and biopesticides), will be a means of reducing the use of chemical pesticides.

Continuous exploration and exploitation of the useful natural enemies of insect pests will not be limited in principle. Transfer of technology from the researchers' laboratory to the extension agents will be a first step to the functional enhancement of the capacity of regional laboratories. To achieve this a central laboratory will be established to continuously fuel the regional laboratories, which will further support the district programmes. In this way, the core of plant protection will be strengthened. In addition, regular services will be offered such as emergency plant protection, capacity-building of farmers and technicians at farmer field schools (FFS) and their links to organic agriculture will be continued. Briefly, FFS are the entry point for organic agriculture and PPD intends to expand this initiative to include more people.

Further information can be obtained from the official website of the Plant Protection Directorate: www.ppdnepal.gov.np.

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4. [e.g. Web link]: www.ppdnepal.gov.np
5. [e.g. photos or other media formats]

…Etc.

SRI LANKA

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Title of activity:	**STUDIES OF FRUIT FLY INFESTION IN BANANA CULTIVARS IN SRI LANKA**
Abstract (250 words):	*Bactrocera dorsalis* (Hendel), *B. kandiensis* (Drew and Hancock), *B. correcta* (Bezzi) and *B. tau* are species of fruit flies that cause substantial economic damage to local fruit. During the latter part of 1998, and the first quarter of 1999, severe infestations of fruit flies in ripe banana were observed in some parts of the country. Investigations where carried out to identify the species of fruit flies responsible for these infestations and to determine susceptibility of different banana cultivars to fruit fly. The most susceptible maturity stage of fruit to fruit fly attack and the effect of **Clorox® (NaOCl)** on egg hatchability on banana fruit were also determined. Banana fruit collected from 20 locations from Kandy, Matale and Kegalle districts were found to be infested with *B. kandiensis* and *B. dorsalis* of which the former species was more prevalent than *B. dorsalis*. Almost all cultivars of banana (Sinhalese: Embul, Alu kehel, Anamalu, Embun, Rathambala and Sini) were susceptible to the fruit fly. Both fruit fly species did not infest immature stages (>55 days old) of banana fruit while mature green stage (70–75 day old) fruit were slightly attacked. Fruit more than 90 days old showed significantly higher infestation than green bananas (<75 days old). Ripe banana fruit that was 90–95 days old were more attractive to fruit flies than fruit that was 100–105 days old. Four concentrations of **Clorox ® (NaOCl)** tested significantly reduced the egg hatchability of fruit flies but resulted in skin damage on fruit. Therefore, **Clorox®** as a dipping treatment for infested banana fruit to prevent egg hatching of fruit flies should not be recommended.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	Specific surveillance Pest – Fruit fly Commodity host – Banana Targeted survey
Summarize the reason for taking the surveillance action:	The investigation was carried out to identify fruit fly species responsible for the attack, the susceptibility of different banana cultivars and different maturity stage to fruit flies.
Summarize the immediate benefit, result or outcome of the surveillance action:	By finding remedies to cope with the problem of availability of bananas for the consumer was assured while limiting the losses for sales outlets.

CARIBBEAN

SAINT LUCIA

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Title of activity:	Leaf Spot Monitoring Services to the Saint Lucia Banana Industry
Abstract (250 words)-:	In Saint Lucia the verification of the basis and nature of disease management for banana production, especially leaf spot disease (Mycosphaerella spp.) is very important in facilitating and justifying trade. This is essential especially with the European Union trading partners as it is meant to comply with EUREPGAP and other food safety standards in terms of the integrity of decision-making and the type of interventions as related to pesticide use in the production of the crop. The Ministry of Agriculture (MOA) in Saint Lucia specifically established a Unit to systematically monitor the progression and management of pests and diseases associated with the production of bananas for export and local consumption. The Banana Emergency Recovery Unit (BERU), later named the Banana Production Management Unit (BPMU), was established and mandated to undertake the monitoring, distribution, intensity and progression of leaf spot disease in banana production. This Unit also reported and advised stakeholders on the appropriate actions recommended for management of banana on a per region basis. Other than collecting biological related data, garnering of agronomic and environmental data is undertaken to contribute to the assessment of the disease status, production of reports and issuing of advisories. The operations of this Unit itself is audited and overseen by a committee of stakeholder representatives and Subject Matter Specialist lead by the Crop Protection Unit (CPU) of the Ministry which comprises the 'Banana Pest and Disease Technical (BPDTC) Committee'. Monitoring the compliance of recommendations issued in the advisories is undertaken by all mentioned stakeholders and reported to and addressed by the BPDTC.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	Commodity/Host
Summarize the reason for taking the surveillance action:	• Management of pests and diseases of economic importance • Specific requirement for facilitating trade with the EU, re bananas • CPU programme for all important economic crops
Summarize the immediate benefit,	Provision of up-to-date status of the disease in commercial producing areas

result or outcome of the surveillance action:	

Provide a narrative of your country's best practice in pest surveillance case:

[Start Narrative here – maximum of 3 pages]

1. **Stakeholders involved**:

- Ministry of Agriculture; Crop Protection Unit; Banana Production Management Unit; Winfresh; Banana Marketing Companies (National Fair Trade Organization (NFTO), Tropical Quality Fruit Company(TQFC)

2. Sources of information that were useful

- Ganry Meyer

3. Management or dissemination of information and methods employed

- Publication and circulation of reports and advisories to main stakeholders via e-copy; and to farmers, service providers and public, via PSAs on radio/TV stations

4. **Incentives that were provided** (legislative, cooperative agreements etc)

- EU trade standard requirements
- ISPM standard requirements
- Local and regional trade standard requirements

5. Survey methods used

- Cronshaw (Ganry and Meyer) biological assessment
- YLS (Youngest Leaf Spotted) agronomic assessment
- Piche (evaporimeter) environmental assessment

6. Pest diagnostic support

- CPU/MOA
- BPMU
- WINFRESH
- CIRAD

7. Record keeping

- BPMU record keeping system

8. **How it was resourced** (human, financial, etc.)

- Government of Saint Lucia (through MOA, BPMU)\

9. **Social, political and other challenges faced** and how they were overcome

- Compliance of treatment service provider to advisory recommendations
- Farmer compliance to maintenance of farms used as reference sites

  These issues were dealt with by conducting ongoing consultations, and training sessions for service providers and farmers

10. Social, political and other support received

- Stakeholder trade commitments
- Government financing of activity

11. **The overall outcome** (expected and unexpected)

- Effective monitoring and assessment of disease status
- Effective and efficient management of the disease
- Enhancement and facilitation of export capabilities

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5. [e.g. photos or other media formats]

…Etc.

ST VINCENT AND THE GRENADINES

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Title of activity:	Fruit Fly Surveillance
Abstract (250 words):	In order to continue trading in fresh fruit with the USA, St Vincent and the Grenadines needed to determine its fruit fly status. Assistance was obtained from the USAID and the Fruit-fly Survey and Detection Project was developed for Grenada and St Vincent and the Grenadines. The overall cost of the project was US$215 500. A Comprehensive fruit fly detection survey was conducted over a period of 18 months and culminated at the end of 1987. The initial survey revealed that the country was free of tephritid fruit flies. The project also included a post-survey project implementation component. The USDA, in consultation with the Ministry of Agriculture and IICA, developed a survey protocol to guide the trapping activities. This manual is the basis on which the fruit-fly surveillance programme is being conducted in St Vincent and the Grenadines. The USDA/APHIS declared St Vincent and the Grenadines fruit fly free in 1987. The country was allowed to export tropical fruit to the USA without treatment. This privilege was curtailed in 2010 after the USA raised concerns about the risk of introducing *Anastrapha obliquia*, which was intercepted in St Vincent in 2002.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	General
Summarize the reason for taking the surveillance action:	To monitor for any introduction of fruit flies
Summarize the immediate benefit, result or outcome of the surveillance action:	Early detection of pest, impact trade positively
Provide a narrative of your country's best practice in pest surveillance case:	
[Start Narrative here – maximum of 3 pages] **Introduction** The fruit fly surveillance programme in St Vincent and the Grenadines got going in earnest in 1988 following the initial survey. A trapping system was introduced for the country. Five traplines were introduced to cover the critical areas. One was on the island of Bequia. A team of trappers were trained and dedicated to servicing the fruit fly traps on a weekly basis. A vehicle, obtained by the project, and a driver was assigned to the programme. There was	

frequent monitoring by IICA on behalf of the USDA/APHIS. *Anastrepha oblique* was intercepted in Bequia in 2002 and was eradicated from the island in 2003. It was discovered in St Vincent in 2003. The trapping programme was intensified and currently the entire mainland is being surveyed on a weekly basis. This surveillance programme has been extremely successful in maintaining low pest prevalence with the view to eradicate. This is mainly the result of arrangements put in place at the inception when the project was implemented.

Project components

The following narrative is a description of project activities:

Public Awareness Programme – The Ministry of Agriculture (MOA) information service took action to ensure awareness of the project (i.e. its activities, objectives and potential value to St Vincent's agricultural sector). The programme consisted of radio and television interviews, newspaper articles, and development of a simple brochure and poster.

Design and Procurement – The USDA/APHIS took responsibility for the design and procurement of the trapping system. APHIS initiated procurement and arranged transport of all trap material to St Vincent. The USDA/APHIS still contribute significantly in this regard.

Training Workshop – USDA/APHIS was responsible for the training of survey personnel. The MOA selected and employed trapping personnel and required them to participate in the APHIS training workshop in St Vincent.

Installation and Servicing of Trapping System – MOA installed and serviced the traps used in the survey. USDA/APHIS personnel identified target areas for placement of the traps and assisted with initial installation. The MOA installed the total number of traps required by the protocol to adequately conduct the survey and regularly service these traps.

Supervision of Trapping Programme – IICA provided local periodic supervision of the survey procedures. USDA/APHIS provided periodic reviews of the survey procedures and data to determine the adequacy of the trapping and data collection procedures.

Official Review of Survey – Aside from periodic reviews APHIS conducted a final evaluation of the survey findings that included an assessment of overall effectiveness of the trapping system.

Emergency Action Contingency – The MOA of St Vincent and the Grenadines should recognize the risk of finding fruit fly pests of significance, which may result in more stringent regulatory actions by importing countries such as the USA. In addition, the survey activity, with modification, would be ongoing in order to maintain a certified status as fruit fly free, once such status is achieved.

Should fruit flies be detected during the trapping period, the country should consider the following actions to address the pest situation.

- Request technical assistance from APHIS and/or other plant protection organizations.
- Increase intensity of survey activity to determine pest population levels and distribution in the country.
- Consider feasibility of using appropriate eradication measures to eliminate fly infestation (e.g. sterile fly releases if appropriate; chemical spraying if appropriate).

Project evaluation – An evaluation of the project will be made by APHIS based on survey findings at certain intervals during the period. The evaluation also included assessment of overall effectiveness of trapping system (servicing, etc.).

Certification – Fruit Fly Free Zone – If an economic pest of an exportable commodity was not found in the country as established by the survey; APHIS in consultation with the MOA will consider providing certification of commercial host material offered for export. Certification was contingent on maintenance of a survey programme and establishment of quarantine procedures to prevent introduction of quarantine significant pests into the country.

Post Certification Protocol – Once certification of fruit fly free zone status was attained, a new protocol was issued by APHIS, which permitted importation of fruit fly host materials from an area determined to be essentially free of the target pest(s). This protocol facilitated movement of host products from the fruit fly free zone into the United States under the following certification guidelines:

- Continuation of trapping in the export zone.
- Certification of origin (to identify origin of fruit from specific growing areas within the export zone).
- The use of one packing shed to maintain identity of fruit and avoid outside contamination.
- Fruit cutting

- Regulatory procedures
- Safeguarding procedures

Plant Quarantine Activities – The establishment of quarantine procedures to prevent introduction of exotic or significant quarantine pests, was an integral part of the certification process and had to be in effect before certification was granted. The MOA identified personnel who have quarantine responsibility and ensure that they received appropriate training to conduct quarantine activities. APHIS and IICA assisted in identifying training needs and coordinated the training effort.

The following are actions that should be considered for implementation by MOA personnel during the project period:

- Quarantine assessment conducted by APHIS, IICA, or FAO quarantine specialist.
- Identifying organizational unit within the MOA for plant quarantine responsibility.
- Request training assistance from APHIS, IICA or FAO.
- Initiate regular contacts with government's customs to sensitize them on the need for their cooperation in quarantine enforcement at airports and seaports.
- Initiate review of existing quarantine laws and authorities to determine need for updating and/or changing
- Along with public awareness programme for fruit fly trapping, include public awareness objectives that deter citizens from importing host materials from neighbouring islands where there may be significant presence of the quarantine pest.
- Prohibit host material from countries/areas where major fruit flies are known to occur.

Conclusion

These systems are very much in place today with other components added to enhance the fruit fly surveillance programme. Some of these include: improved legislation, the use of bait sprays, host rearing, bait stations, increased quarantine presence at ports of entry, upgrading of staff and physical facilities. This system would not have been as efficient if all the stakeholders including farmers and property owners had not been intimately involved in the process. Even though export of fruits to the USA has been impeded, Vincentians continue to enjoy fruit that is free of larva because of an excellent surveillance programme.

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

1. [e.g. News article: Utopia successfully averts major pest outbreak of *Pestifera majora*. Food supply safe. The Utopia Chronicle, December 12, 2018]
2. [e.g. Science journal article]
3. [e.g. NPPO report]
4. [e.g. Web link]
5. [e.g. photos or other media formats]

…Etc.

SURINAME

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Title of activity:	Detection and control of the Carambola fruit fly (*Bactrocera carambolae* Drew & Hancock) in Suriname
Abstract (250 words):	From the start of the Carambola fruit fly project in Suriname in 1986 until 2012 Suriname has conducted fruit fly surveys. The surveys have not been conducted continuously over the period of 1986-2012. There were stops in the implementation of the Carambola fruit fly programme in Suriname because of a lack of finances and human resources. The fruit fly surveys were conducted in two ways: by fruit collections of various fruit plants and by fruit fly trapping. Consideration is taken in selecting the trapping site: availability of preferred hosts, with fruit, in which to place the trap. The maintaince of the traps in the field is important. The density should be applied following the chart (number of traps per km^2):

TRAP	AREA	DETECTION	DISTRIBUTION	CONTROL
Jackson	rural	2 (or 1 each 5 km in a highway)	10 to 20	30-50
Jackson	urban	0.5	10 to 20	50-80
McPhail	rural	0 for detection, 2 to determine	4 to 8	10-20
McPhail	urban	zero	4 to 8	10-20

Collecting the fruit – Collectors should try to take samples of many stages of ripeness and include newly ripe, mature and old injured fruit. The sample should be large enough to determine if the fruit have larvae. A reasonable sample is 20; for small fruits – such as West Indian cherry – a sample could contain over a hundred fruit, while in the case of a large fruit like soursop, 3-4 fruit would be enough. The collected fruit was taken to the lab for the rearing of fruit flies.

Fruit holding and fruit fly rearing – In the lab the fruit is counted, weighed, recorded and transferred if required to smaller containers for rearing.

Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	The type of surveillance conducted for the Carambola fruit fly (CFF) project over the period 1986-2002 and over the last year (2010) was of the specific survey type. It was a combination of pest survey, host survey and targeted survey. Fruit collection was continuously from 1986 to present (2012).
Summarize the reason for	As part of the Carambola fruit fly programme the reason for specific pest surveys conducted from 1986 to 2002 was to know the distribution of this organism and the second reason was to know

taking the surveillance action:	the host status of this pest in Suriname. The third reason was monitoring of the fruit fly population during and after the implementation of the fruit fly control programme; results of the control programme The pest surveys currently applied are aimed at the preference of the CFF regarding varieties of specific host species, and to monitor the distribution of the Carambola fruit fly and the population dynamics.
Summarize the immediate benefit, result or outcome of the surveillance action:	The surveillance action resulted in knowing the distribution of CFF and the host status of the CFF in Suriname. The Ministry has gained experience with making survey protocols, conducting surveys and reporting. This surveillance action also resulted in the improvement of the cooperation between extension officers and the research division with regard to survey procedures. The CFF project introduced the use of GPS, mapping using Arc view, and curently Surinamese technicians provide training to others in the Caribbean regarding fruit fly monitoring and control techniques. Alongside the survey of the CFF, the field visits are also used for the early detection of the insect vector, *Diaphorina citri* Kuwayama, of the Citrus greening disease. It is also used for the early detection of *Sternochetus mangiferae* (Fabricius), the Mango seed weevil.

Provide a narrative of your country's best practice in pest surveillance case:

[Start Narrative here – maximum of 3 pages]

The best practice case of Suriname is regarding the pest surveys conducted regarding the Carambola fruit fly (CFF), *Bactrocera carambolae* Drew & Hancock, Control Programme in Suriname. These pest surveys can roughly be divided into the initial surveys from 1986 to 2002 and the monitoring surveys (trapping) that started in November 2010. Fruit collection (aimed initially at distribution, later as host identification of all fruit flies present) started in 1986 and continued to the present (2012).

THE INITIAL PEST SURVEYS (from 1986 to 2002)

1. Purpose of the survey – At the start of the programme, which began in 1986, the main purpose of the pest surveys were to know the distribution of the organism in Suriname and also to determine the host status of the various fruits for the Carambola fruit fly (*Bactrocera carambolae* Drew & Hancock), which was initially thought to be Oriental Fruit Fly (Now a complex, of which the CFF is a species).

2. Name of the targeted pest and their diagnostic characteristics – It can be said that this organism/pest has been present in Suriname since 1975. In 1975, several specimens were reared on fruit and stored unidentified in the insect collection of the Agricultural Experiment Station of the Ministry of Agriculture, Animal Husbandry and Fisheries. Flies were sent for identification to the Smithsonian after a new fruit collection showed the presence of this exotic fruit fly in 1986. The sent specimen was identified as the *Bactrocera carambolae* Drew & Hancock.

The Carambola fruit fly's origin is Indonesia, Malaysia and Southern Thailand. As an invading specie it is found in the northern part of South America: Suriname, Guyana, French Guyana and northern Brazil (Amapa).

Impact – The Carambola fruit fly is seen as a threat to the fruit sector of Suriname. Also as a threat for expanding its geographical distribution to the tropical areas of South and Central America and the South of the USA.

Morphology – Egg is curved (banana-shaped), 1 mm long, shining white, milky when ready to hatch. Pupa is cylindrical, about 4 mm long, dark reddish-brown, resembling a swollen grain of unhusked rice. Larva is elongated and pointed at head. Length from 1 mm just after hatching to 7-8 mm just before pupation. The colour is white or the same color as the fruit pulp. If larvae of the third instar are confronted with an unfavorable microclimate, they are able to jump repeatedly about 10 cm or more and move to more suitable conditions. This is especially visible when they are placed on a dry surface (White *et al*. 1992). Adult (Drew and Hancock, 1994), distinguish the *B. dorsalis* species complex as follows: *Bactrocera* (*Bactrocera*) spp. with a clear wing membrane, except for a narrow costal band (not reaching R4+5); cells bc and c colorless (except in a few non-pests with a very pale tint) and devoid of microtrichia. Scutum mostly black, with lateral but no medial vittae; yellow scutellum, except for basal band, which is usually very narrow; abdomen with a medial dark stripe on T3-T5, dark laterally but form of marking varies from species to species (Figure 2).

Additional characteristics (including those of the subgenus) are that the narrow part of cell br has microtrichia; anterior supra-alar setae are present; pre-scutellaracrostichal setae are present (except in a few non-pest spp.); male abdomen with pectin on each side of T3; male sternite 56 with a V-shaped posterior margin.

The following key was based partly on Drew and Hancock, 1994, and partly on a study being carried out by I.M. White and K. Mahmood (I.M. White, IIE, personal communication, 1996), in which the variability of each character is being quantified, so as to establish the relative reliability of each character. The keys presented here include all eight members of the complex, which are known to attack commercial fruit crops (the additional species being *B. caryeae*, *B. kandiensis* and *B. pyrifoliae*). These eight species fall into three groups, as follows:

1) Species with a dark mark on the post-pronotal lobe, narrow lateral vittae and extensively marked femora. Only two pest species belong to this group, and both are from the south Indian subcontinent area, namely *Bactrocera caryeae* in southern India and *B. kandiensis* in Sri Lanka. White and Elson-Harris (1992) gave notes on these species, with *B. kandiensis* referred to as sp. D as it was not formally named at that time. These two species differ markedly in body patterning end there is little reason to doubt that they are separate species.

2) Species with yellow post-pronotal lobes, tapered lateral vittae, and femora not extensively marked. Only one pest species belongs to the large section of the complex that is characterized by tapered lateral vittae. *Bactrocera pyrifoliae* is only known in northern Thailand where it has been reported as a pest of pear.

3) Species with yellow post-pronotal lobes parallel lateral vittae, and femora not extensively marked. The remaining five pest species are *B. carambolae, B. dorsalis*, *B. occipitalis*, *B. papayae* and *B. philippinensis*.

The following list summarizes the differences between these species: *B. carambolae*: short aculeus/aedeagus; tomentum with no gap; deep costal band; intermediate abdominal markings. *B. dorsalis*: short aculeus/aedeagus; tomentum with no gap; narrow costal band; wide abdominal markings. *B. occipitalis*: short aculeus/aedeagus; tomentum with gap; deep costal band; with abdominal markings. *B. papayae*: long aculeus/aedeagus; tomentum with no gap; narrow costal band; narrow abdominal markings. *B. philippinensis*: long aculeus/aedeagus; tomentum with no gap; costal band variable; narrow abdominal markings.

Target hosts – Wild and cultivated fruit plants from different species.

The survey area – Fruit collections were made in most of the human inhabited areas in Suriname and partly (due to limited accessability) in the forested area of Suriname. Specifically the districts of Coronie, Saramacca, Para, Brokopondo, Commewijne, Marowijne en Sipaliwini(Map).

The site choice and sample size – The host and geographical distribution surveys began with fruit surveys: collecting wild and cultivated fruit from many locations throughout the country. Gradually trapping with McPhail, baited with Torula, and Jackson traps, baited with methyl-eugenol/malathion came into place and these were used for the monitoring surveys done for the control/eradication programme.

How was it decided where to look for, how many places to look in and what sort of data to collect?

Initially, every opportunity to go to the field was used to collect information by gathering fruit. Trapping was done placing traps along roads (just a limited amount throughout the country) with a more extensive grid in villages or cities.

Sample size for the fruit collection – Fruit samples ranging from 1 to over 100 fruit were collected by gathering fruit either fallen recently on the ground or picked from the fruit tree.

Timing of the survey – Best timing of the survey: Which period of the year: dry or wet season, crop cycle (fruit), pest lifecycle, etc. Thanks to the fruit survey, information was gathered on an abundance of hosts in the different seasons and gave insight as to the main hosts and alternative hosts

Frequency of the survey – Currently traps are serviced on a monthly base (Jackson traps) or bi-weekly (McPhail); and fruit is collected at the same time the traps are visited. Sometimes specific trips are made to collect forest fruit, to gain additional information.

Data collected – The GPS hand unit records the longitude and latitude; this is entered into the computer and data relating to these traps or to these fruit collections are linked. The GPS records latitude and longitude in degrees/minutes.

Methods of collecting specimens – Fruit was sampled, recorded and labelled. Also prepared for transport to the lab for further research as the rearing of fruit flies from the fruit samples takes place in the laboratory. Organism/pest specimens were collected from the traps, recorded, labelled and prepared for further lab research mainly for identification. Except for the data from Jackson traps since this is a specific male lure and only catches CFF-males.

THE RECENT MONITORING SURVEYS

Purpose of the survey – These surveys are of recent origin. In the last few years because of the financial support from the Ministry itself the detection surveys have started again and are now (situation 2011 -2012) being conducted to know the present distribution of CFF; specific research is done to establish the preference of the CFF for several

varieties of specific host species.

Name of the targeted pest and their diagnostic characteristics – Alongside the survey of the CFF, the field visits are used for the early detection of the insect vector, *Diaphorina citri* Kuwayama, of the Citrus greening disease. It is also used for the early detection of *Sternochetus mangiferae* (Fabricius), the Mango seed weevil in Suriname. Again fruits of known hostplant (different varieties) are collected and trapping is used to collect fruit fly specimens.

Target hosts – The different varieties of known host plants in Suriname, and forest fruits to gain additional knowledge of fruit fly infestation.

The survey area – Fruit collections are being done in every area that is visited.

The site choice and sample size – Site is chosen depending on the route followed for trapping. In case it is a specific trip for fruit collection, sites are chosen based on availability of hosts. Sample size for the fruit collection – Fruit samples ranging from 1 to over 100 fruit were collected by gathering fruit either fallen recently on the ground or picked from the tree.

Timing of the survey – The survey is continuous, except for the vector of citrus greening, it will be conducted unti a certain amount of locations in Suriname are visited to show that the vector is either present or absent (status unknown at this moment).

Data collected – Were the survey sites tagged and how? Use of GPS system? What data was recorded in the field?

Fruit collection: fruit species, variety, location – address, farmer etc; GPS location, number of fruit, weight, specific remarks if available. Each sample has its own number, and is filed in a note book and in computer files.

Traps: GPS data, location address and name of farmer, tree in which trap is placed, presence of fruits, type of trap and type of lure.

Methods of collecting specimens – Fruits were sampled, recorded and labelled. Also prepared for transport to the lab for further research as the rearing of fruit flies from the taken fruit samples.

Organism/pest specimens were collected for the traps, recorded, labelled and prepared for further lab research mainly for identification. For Jackson traps, the insert is brought to the lab.; for McPhail the content is brought to the lab and analysed for species and sex of fruit flies. Specimens are kept in alcohol and labelled with date and trap number.

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

1. CFF manual: Operations manual Carambola fruit fly, November 1997, Malavasi, A. Midgarden, D. and van Sauers-Muller, A.

2. VanSauers-Muller, A. Host plants of the Carambola fruit fly, Bactrocera carambolae Drew &Handcock (Diptera: Tephritidae), in Suriname, South America.

3. *Neotropical Entomology*, 34(2): 203-214 (2005)

TRINIDAD AND TOBAGO

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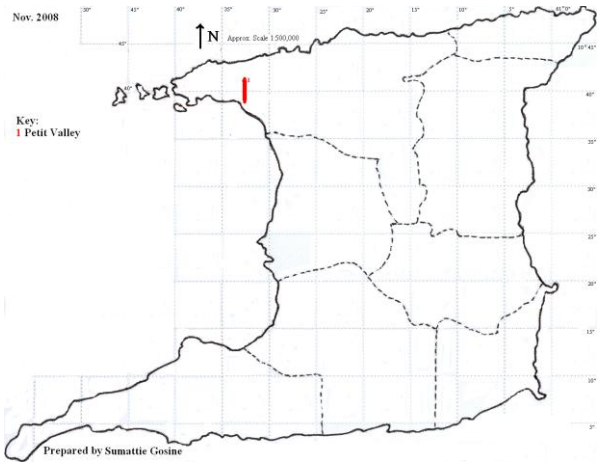
Title of activity:	Eradication of giant African snail in Trinidad and Tobago
Abstract (250 words):	Surveillance for the giant African snail, *Achatina fulica* in Trinidad and Tobago began in 2004. Detection surveys at sites considered to be 'high-risks' for introduction and suitable habitat were conducted twice per year. In 2008, *A. fulica* was discovered in an upper scale residential area – a site not considered as 'high-risk'. After detection, surveillance was broadened. Delimiting surveys to determine the extent of infestation and monitoring surveys to map the spread were initiated. Delimiting surveys were guided by resources from the USDA-APHIS. Islandwide surveys were guided by ISPM's 6 and 8 employing the use of electronic resources – telephone hotline and email. Data are kept on hard and electronic database. Surveys were aided by the launch of and an ongoing aggressive public awareness and participation campaign. Execution of surveys co-opted various stakeholders. Public participation and compliance were elicited by inspiring a wide-range of human emotions – disgust, fear, anger, pride and patriotism. Three years later *A. fulica* is limited to a valley in the northwest of Trinidad where it was first detected, and the eradication programme has received favourable reviews from FAO.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity/Host, Random, or Targeted survey):	Pest specific
Summarize the reason for taking the surveillance action:	Collaborative work with USDA to monitor the introduction and spread of pest of quarantine importance in the Caribbean.
Summarize the immediate benefit, result or outcome of the surveillance action:	Early detection, early diagnosis and thus greater flexibility in management to minimize economic impact.
Provide a narrative of your country's best practice in pest surveillance case:	
The giant African snail, *Achatina fulica* Bowdich (Mollusca: Achatinidae) is an invasive alien species. It is native to East Africa. In 1966, it was introduced into California, USA and eradicated. In 1984 it spread to the French-speaking Caribbean but was only introduced into the English-speaking Caribbean in 2000 in St Lucia and Barbados. This introduction raised concerns, both as a threat to agriculture and human health in the region. The Inter-American Institute for Cooperation on Agriculture (IICA), Food and Agriculture Organization of the United Nations (FAO) and the United States Department of Agriculture (USDA) sponsored a workshop in St Lucia in December 2002 to raise awareness of *A. fulica* as a threat, methodology to initiate detection surveys and recommendations on its eradication and control. USDA followed through with detection surveys in the region. In 2004 the first detection survey in Trinidad and Tobago – a collaborated effort with the Research Division, Ministry of Agriculture, Land and Marine Resources and the Department of Agriculture, Tobago House of Assembly was	

conducted.

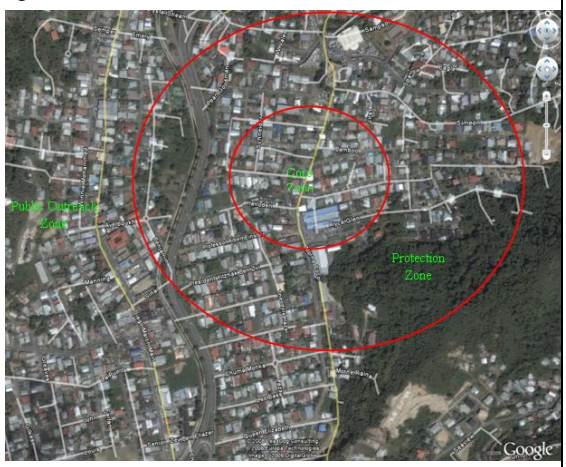
Sites that were considered high risk for *A. fulica* entry and establishment were surveyed; these included: ports of entry, marinas, dumpsites, nurseries and areas with high calcium carbonate deposits. The site and a 50 m buffer were inspected for snails. At each location, snails were sought under leaf litter, discarded boxes, on walls and shrubs, in drains, brick holes and crevices. All snails similar in appearance to *A. fulica* were collected, bagged, labelled and returned to the laboratory for identification. Such surveys were conducted by the Research Division twice a year at the beginning and end of the wet season. No giant African snail was found and a comprehensive list of the terrestrial malacofauna of Trinidad and Tobago was compiled. (Robinson, Fields and Zimmerman, 2004. *The terrestrial malacofauna of Trinidad and Tobago. Interim Report).*

In October 2008 two snails from a residential area in Petit Valley were submitted to the Entomology Diagnostic Laboratory. Chanderbhan Shripat, Entomologists identified the snails to be *Achatina fulica*. This was confirmed by malacologists David Robinson (USDA-APHIS) and Angela Fields (UWI, Cave Hill). This was the first report of *A. fulica* in Trinidad. To date Tobago is pest free.

A technical package on *A. fulica*, action plan, budgetary requirements, survey training manual, implementation schedule and public-awareness programme were developed. Research Division, in collaboration with Veterinary Public Health, Ministry of Health, immediately launched a reconnaissance survey to determine the extent of infestation. Survey methodology was adapted from USDA-APHIS 2005 *New Pest Response Guidelines Giant African Snails: Snail Pests in the Family Achatinidae (USDA-APHIS. 2005. New Pest Response Guidelines Giant African Snails: Snail Pests in the Family Achatinidae. USDA-APHIS-PPQ-Emergency and Domestic Programs-Emergency Planning. Riverdale, Maryland)*. Every plot of land (including empty lots, abandoned lots, parks, road edges, drains and rivers) within a 200 m radius (core zone) from the index case was surveyed. Beyond the core zone (protection zone) random checks were made 50 m apart to the north, south and west to the Diego Martin river. In all zones (core, protection and public outreach zones) flyers and brochures were placed in every mail box and posters stuck on public and commercial sites where people gather.



Achatina fulica distribution in Trinidad



Core and protection zones around the index cas Achatina fulica in Trinidad

A. fulica distribution was restricted to less than 1 km^2 area around the index case in Petit Valley and an aggressive eradication programme was immediately launched by the Research Division.

Surveillance continued at two levels: (i) within the infested valley (as described in paragraph above) and (ii) islandwide. Islandwide surveilance continued through hotline and email services. Through the public awaremess campaign (television/radio/newspaper/cinema and electronic board advertisements; flyers/brochures/posters and newspaper supplements; public seminars/lectures/exhibitions; town meetings and talk shows) the hotline and email were advertised urging citizens to report snail sighting. A giant African snail hotline training manual was produced and distributed. All data is kept as hard copy and in Microsoft Access® databases. The public awareness campaign encouraged citizens to stop the spread and help eradiate *A. fulica*; threatened the consequences of not reporting sightings; inspired keeping the rest of Trinidad and Tobago *A. fulica* free. To date *A. filica* distribution is restricted to the Diego Martin Valley in the northwest of Trinidad.

Challenges faced eliciting coperation among stakeholders, securing a dedicated budgetary allocation, limited human resources with an extensive work programme, and a legal system that moves at a snail's pace. The support of stakeholders were elicited through the formation of giant African snail task force, which oversees the management of the programme. Members of the task force and invitees to meetings included but were not limited

to government and non-governmental agencies: Environment, Forestry, Regional Cooperation, Health, Veterinary Services, CEPEP, Schools and Village Councils. Financial support was obtained by emphasing the threat posed by *A. fulica,* citing historical cases of the economic loss, outlining the potentail impact to Trinidad and Tobago and listing the requirements needed to allay same. Independent assessments by FAO that reported favourably on the programme's performance and outlined the way forward secured the continued financial and governmental support. Work hours were increased by soliciting specific and directed assistance from other government and non-government agencies, remobilizing staff from other programmes, paring staff's work programme to essentials, and hiring of labour. Limited and lack of dedicated human resources continues to impede the success of the programme. A cordial to hasten the legal system is still to be discovered.

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

Presentation: Shripat C. 2010. *Towards eradication of giant African snail Achatina fulica in Trinidad and Tobago*. (Available at: http://www.cedaf.org.do/eventos/cfcs_2010/presentaciones/02_lunes/tarde/14p.pdf)

News Article: Diego Regional Corp, Cepep combine to battle snails.Trinidad Guardian. March 10 2010. (Available at: http://test.guardian.co.tt/?q=news/general/2010/03/13/diego-regional-corp-cepep-combine-battle-snails).

Plant Protection (Giant African Snail) (*Achatina Fulica*) Order, 2010. (Legal Notice No. 31 of 2010). Trinidad and Tobago Gazzette Vol. 49 No 17. Legal supplement Part B. (Available at: http://webopac.ttlawcourts.org/LN/LN2010/LN31_10.pdf).

Press release: Giant African Advisory. 2009. (Available at: http://www.health.gov.tt/news/newsitem.aspx?id=64).

Country report to IPPC: 2009. Giant African snail. (Available at: https://www.ippc.int/index.php?id=92&tx_pestreport_pi1 percent5BshowUid percent5D=209457).

LATIN AMERICA

BRASIL

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Título de la actividad:	**PROGRAMA DE ERRADICAÇAO DA MOSCA DA CARAMBOLA NO BRASIL**
Resumen (250 palabras):	O Programa Nacional de Erradicação da Mosca da Carambola – PNEMC, Decreto 2226/97, está sob a responsabilidade da Coordenação Geral de Proteção de Plantas do Departamento de Sanidade Vegetal (DSV) a ONPF brasileira, da Secretaria de Defesa Agropecuária (SDA), do Ministério da Agricultura, Pecuária e Abastecimento (MAPA), tendo como objetivo a erradicação da praga no Estado do Amapá e a manutenção do status de 'Isem presença da praga' de Bactrocera carambolae das 26 unidades federativas. Em 1996, a mosca da carambola foi detectada no município de Oiapoque – AP, oriunda da Guiana Francesa após ser detectada no Hemisfério Ocidental (Suriname) em 1985. Este fato é resultado do transporte de frutos contaminados da Indonésia pela comunidade de indonésianos residentes no Suriname. A praga está presente no Suriname, na Guiana Francesa, na Guiana e no extremo norte do Brasil. A *Bactrocera carambolae* é considerada como uma praga de importância econômica potencial para uma área em perigo, presente no país, porém não amplamente distribuída, encontrando-se sob controle oficial. O MAPA vem controlando a praga nos últimos 16 anos, prevenindo sua entrada nos países da América do Sul que estão inseridos no Comitê de Sanidade Vegetal do Cone Sul, Comitê Andino, assim como nos países da América Central. No Brasil, entre as culturas mais prejudicadas, caso a mosca da carambola instale-se em definitivo, estão manga, goiaba, acerola, carambola, tomate e citros, já que o brasileiro é o maior parque citrícola mundial. O Departamento de Agricultura dos Estados Unidos da América estima, por outro lado, que, caso não seja realizado o controle da mosca da carambola, o Brasil poderá perder 5 percent da produção de laranja, ao serem atingidas as áreas de produção. Considerando-se apenas laranja e manga, na hipótese aventada, o País poderá ter prejuízos da ordem de 18,3 milhões de dólares anuais. Estudos estão sendo realizados para determinar as perdas em outras culturas hospedeiras .A *Bactrocera carambolae* é considerada 'Praga Quarentenária Presente' (praga de importância econômica, não amplamente distribuída e sob controle oficial), conforme a INSTRUÇÃO NORMATIVA Nº 52, DE 20 DE NOVEMBRO DE 2007[1]. O controle oficial visa à qualidade dos produtos no mercado interno e à garantia das exportações do agronegócio frutícola, que conta com área plantada em torno de 2,5 milhões de hectares e estimativa de cinco milhões de empregos diretos, gerados em fazendas. A mosca da carambola (*Bactrocera carambolae*) é considerada o principal obstáculo para as exportações do agronegócio da fruticultura, pois os principais compradores de frutas como União Européia, países asiáticos, EUA e os países do MERCOSUL estabelecem restrições à aquisição de produtos oriundos de países afetados pela praga. Os dez maiores compradores de frutas brasileiras em 2010 foram Argentina, Estados Unidos, Uruguai, Chile, Indonésia, Paraguai, Tailândia, Canadá e Alemanha, sendo

[1] Disponível em http://sistemasweb.agricultura.gov.br/sislegis/action/detalhaAto.do?method=consultarLegislacaoFederal

	que o status de livre da praga 'mosca da carambola' é um requisito fitossanitário por eles estabelecido. Os prejuízos causados pela Bactrocera carambolae são: i) danos diretos aos frutos; ii) perda dos mercados de exportação; iii) elevação de custos nas ações de controle, de monitoramento e supervisão, tanto para o produtor como para o Governo Federal. O estudo da viabilidade econômica da erradicação da mosca da carambola na América do Sul, realizado em 1995, pelo Departamento de Agricultura dos Estados Unidos (USDA) indicou que os danos econômicos e ambientais causáveis no Brasil, pela praga, estão estimados em US$30,8 milhões no primeiro ano e US$ 92,4 milhões no terceiro ano, em caso de dispersão pelo Território Nacional. Os danos ambientais estão relacionados a possíveis ataques a plantas nativas da Floresta Amazônica, afetando a biodiversidade da Região, além dos efeitos nocivos decorrentes da utilização de agrotóxicos. Segundo o USDA (1995), cada dólar investido na erradicação da praga geraria benefícios marginais entre US$65.00 a US$88.00 reforçando o conceito de que a prevenção seja a melhor e mais barata forma de controle. O Brasil vem investindo em ações de controle desta praga, dentre elas adotou o uso de inseticida orgânico, de custo elevado, que minimizam os impactos ambientais. Adicionalmente, estudos realizados pela EMBRAPA (2011) indicaram que a partir do quinto ano da dispersão da praga para o nordeste brasileiro, as perdas com a cultura da manga, goiaba e citros serão de 450 milhões de reais, portanto este estudo demonstra ainda que o benefício econômico do controle na região norte do Brasil, seria de 400 milhões de reais . **I - AÇÕES DO PROGRAMA NACIONAL DE ERRADICAÇAO DA MOSCA-DA-CARAMBOLA:** • Elaboração de Planos de Contingência e aplicação das medidas identificadas para prevenção da entrada da praga às unidades da federação consideradas de alto risco no estado de Amazonas, Maranhão, Roraima. • Levantamentos de detecção, verificação, prospecção, • Monitoramentos semanais de frutos no Vale do Jarí nas quatro rotas de monitoramento visando detectar a presença da praga em fase larval. • Plano de Contenção do Extremo Norte do Amapá; • Plano de Erradicação de *Bactrocera carambolae* do sul do Amapá; • Plano de Pós-Erradicação do Vale do Jarí implantado em abril/ 2008, após a erradicação do foco na região de Monte Dourado/Almeirim (Pará) e Laranjal do Jarí (AP); • Ações emergenciais realizadas quando da detecção de um foco da praga em território amapaense ou qualquer unidade federativa do Brasil; • Ações de educação sanitária para apoiar os Planos de Trabalho propostos na região; formação de multiplicadores pelo núcleo de educação sanitária; • Capacitação técnica em ações emergenciais de erradicação da mosca-da-carambola para as unidades federativas considerados de alto risco.
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	Encuestas (Levantantamentos) de prospecção, delimitacão, verificaçao. .Para a condução dos levantamentos de prospecção foram estabelecidas áreas de alto, médio e baixo risco de introdução da praga, tomando como parâmetro as rotas de risco aéreas, fluviais e terrestres, que interligam cidades brasileiras com os locais de ocorrência da praga no Estado do Amapá e nos países fronteiriços (Guiana Francesa e Suriname e Guiana).Os levantamentos de detecção realizados pelo Programa Nacional de

	Erradicação da Mosca-da-carambola no Brasil em todas as Unidades da Federação onde não há ocorrência da praga, bem como os levantamentos de verificação onde a mesma está presente. O levantamento de verificação, atualmente realizado somente no Estado do Amapá e Roraima e na fronteira entre o Pará e Amapá, ocorre continuamente e tem como objetivo verificar as características da população da praga, delimitando as áreas infestadas. A densidade das armadilhas dos planos de contenção na região do extremo norte do estado, erradicação no sul e pós-erradicação no Vale do Jarí, foi estabelecida levando-se em conta as medidas propostas em cada Plano de Trabalho e obedecem aos critérios do Manual da Internacional Atomic Energy Agency (IAEA, 2005).
Resuma el motivo por el que se adoptó la medida de vigilancia:	A metodologia do PNEMC tem como base o risco de dispersão da praga do Estado do Amapá para outras Unidades da Federação e de introdução em estados que fazem fronteira com países onde a praga está presente. Nos levantamentos de detecção, e delimitação de *Bactrocera carambolae* no Brasil, são utilizadas armadilhas dos tipos Jackson e McPhail, contendo atrativos de dois tipos(sexual e alimentar), respectivamente. O atrativo da armadilha Jackson é uma solução de Metil Eugenol com inseticida Malathion e na McPhail utilizam-se tabletes de Torula ou proteína hidrolisada de milho a 5 percent de concentração. A armadilha Jackson tem a finalidade de capturar machos, enquanto a McPhail captura ambos os sexos, mas, preferencialmente fêmeas .Nos estados classificados como locais de 'Baixo Risco' encontram-se instaladas no mínimo 10 armadilhas, enquanto que nos considerados como 'Médio Risco' há no mínimo 30 armadilhas, e naqueles de 'Alto Risco', recomenda-se a instalação de armadilhas Jackson.. O sistema de detecção tem cerca de 3.870 armadilhas monitoradas em território brasileiro, sendo 2.532 armadilhas Jackson e 1.338 McPhail. No Estado do Amapá, são realizados levantamentos de verificação da praga e, nas demais Unidades da Federação, nas quais a praga não foi detectada, são realizados levantamentos de detecção que marcam os limites entre áreas infestadas e locais sem a presença da praga. Essas informações coletadas servem para apoiar as negociações brasileiras de exportação de frutas e corroborar com as informações contidas na Instrução Normativa n. 52, de 20 de novembro de 2007 (BRASIL, 2007).
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	Essas informações coletadas servem para apoiar as negociações brasileiras de exportação de frutas e corroborar com as informações contidas na Instrução Normativa n. 52, de 20 de novembro de 2007 (BRASIL, 2007) e planejar ações emergências e de prevenção da Bactrocera carambolae com vistas a sua erradicação.

Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:

O Programa Nacional de Erradicação da Mosca da Carambola – PNEMC, Decreto 2226/97, está sob a responsabilidade da Coordenação Geral de Proteção de Plantas do Departamento de Sanidade Vegetal (DSV) a ONPF brasileira, da Secretaria de Defesa Agropecuária (SDA), do Ministério da Agricultura, Pecuária e Abastecimento (MAPA), tendo como objetivo a erradicação da praga no Estado do Amapá e a manutenção do status de 'Isem presença da praga' de Bactrocera carambolae das 26 unidades federativas.

I - AÇÕES DO PROGRAMA NACIONAL DE ERRADICAÇAO DA MOSCA-DA-CARAMBOLA:

- Elaboração de Planos de Contingência e aplicação das medidas identificadas para prevenção da entrada da praga às unidades da federação consideradas de alto risco no estado de Amazonas, Maranhão, Roraima.
- Levantamento de detecção, ou seja monitoramento das regiões consideradas de alto, médio e baixo risco de dispersão da praga num total de 4.465 armadilhas, sendo 2.778 armadilhas Jackson e 1.677 armadilhas McPhail.
- Monitoramento do estado do Amapá com armadilhas instaladas em todos os 16 municípios, num total de 1.481 armadilhas Jackson e 1.302 armadilhas McPhail, totalizando 2.783 armadilhas.
- Monitoramento de 46 pontos com 808 armadilhas Jackson e 121 McPhail em um total de 1.062 armadilhas, visando o monitoramento da rota de maior risco de dispersão que o baixo rio Amazonas e outros pontos considerados de alto risco no estado do Pará.
- Monitoramentos semanais de frutos no Vale do Jarí nas quatro rotas de monitoramento visando detectar a

presença da praga em fase larval.
- Plano de Contenção do Extremo Norte do Amapá.
- Plano de Erradicação de *Bactrocera carambolae* do sul do Amapá.
- Plano de Pós-Erradicação do Vale do Jarí implantado em abril/ 2008, após a erradicação do foco na região de Monte Dourado/Almeirim (Pará) e Laranjal do Jarí (AP).
- Ações emergenciais realizadas quando da detecção de um foco da praga em território amapaense ou qualquer unidade federativa do Brasil;
- Ações de educação sanitária para apoiar os Planos de Trabalho propostos na região; formação de multiplicadores pelo núcleo de educação sanitária.
- Capacitação técnica em ações emergenciais de erradicação da mosca-da-carambola para as unidades federativas considerados de alto risco.
- El proyecto de una duración de dos años se inició en octubre de 2006 desarrollándose actividades hasta diciembre de 2008.

Ámbito de influencia
Este PROGRAMA e realizado em suas diversas linhas de açoes em todo o território nacional.

Objetivo general
- Controlar a mosca das frutas Bactrocera carambolae em territorio amapaense visando a erradicaçao e manter as demais unidades federativas o status de ' sem a presença da praga' visando manter as exportaçoes brasileiras e o agronegocio fruticultura

Objetivos específicos
- Disponer de información sobre las plagas forestales presentes y no presentes en el país y material didáctico para capacitación.
- Implementar una colección de insectos y patógenos forestales.
- Conocer la distribución geográfica de las plagas forestales presentes en el país
- (georeferenciación).

Instituciones cooperantes
Sob coordenaçao da ONPF brasileira as instituições abaixo realizam as seguintes açoes
- Agencia de Defesa Agropecuaria do Estado do Amapá- DIAGRO nas açoes emergencias de brotes
- Agencia de Defesa Agropecuaria do Estado de Roraima-ADERR nas açoes de fiscalizaçao do transito
- Agencia de Defesa Agropecuarias do Estado do Pará – ADEPARA nas açoes de levantamentos de detecçao , verificaçao, açoes de erradicaçao , vigilancia do transito.
- Agencias de Defesa Agropecuarias e Secretarias de Agriculturas em todo territorio nacional na execuçao dos levantamentos de deteção e prospeçao.
- Embrapa – Empresa Brasileira de Pesquisa Agropecuaria.
- Rede Amazonica de Pesquisa sobre Moscas das Frutas liderado pela Embrapa – Amapá.
- CENA –Centro de Energia Atomica para Agricultura da Universidade de São Paulo
- Universidade de São Paulo- Laboratorio de Entomologia coordenado pelo Prof. Dr Roberto Zucchi
- INPA – Instituto Nacional de Pesquisa da Amazonia – Prof.Dra. Beatriz Rochi Teles.

Ejecución:
O Programa Nacional de Erradicaçao da Mosca da Carambola –Bactrocera carambolae, em 2011, obteve um aporte de recursos financeiros do governo brasileiro definidos para esta ação no valor de U$ 5.000.000 en 2011. Em 2012 os recursos aprovados na Lei Orçamentária Anual (LOA) será de U$ 2500.000, no entanto o Programa deberá contar com recursos suplementares a serem aprovados no segundo semestre. Os recursos são gastos nas açoes descritas no resumo deste questionario..

Actividades:
Actividades de Vigilancia
- Levantamentos de prospecção.
- Levantamento de detecção das regiões consideradas de alto, médio e baixo risco de dispersão da praga num total de 4.465 armadilhas, sendo 2.778 armadilhas Jackson e 1.677 armadilhas McPhail.
- Levantamento de verificação (monitoramento) no estado do Amapá com armadilhas instaladas em todos os 16 municípios, num total de 1.481 armadilhas Jackson e 1.302 armadilhas McPhail, totalizando 2.783 armadilhas;
- Levantamento de verificação semanais e 381 armadilhas Jackson , 121 McPhail no total de 502 armadilhas no estado de Roraima.
- Levantamento de verificação semanais na fronteira entre o Amapá e Pará região do Vale do Jarí.
- Levantamento de deteçao (Monitoramento) de 46 pontos com 808 armadilhas Jackson e 121 McPhail em

um total de 1.062 armadilhas, visando o monitoramento da rota de maior risco de dispersão que o baixo rio Amazonas e outros pontos considerados de alto risco no estado do Pará.
- Monitoramentos semanais de frutos no Vale do Jarí nas quatro rotas de monitoramento visando detectar a presença da praga em fase larval.

Resultados:
Informaçao sistematizada que tem como objetivo dar apoio às açoes de prevenção , controle e erradicaçao da praga Bactrocera carambolae nas seguintes açoes
- As informaçoes coletadas nos monitoramentos realizados semalmente ou quinzenalmente em áreas com a presença da praga, onde estão sendo realizadas açoes de erradicaçao e controle indicam a flutuaçao da praga o que indica a resposta às açoes de controle e erradicaçao definidas na metodologia utilizada no Plano de Contingencia.
- Permitem tomar medidas rápidas e eficientes nas ações emergenciais realizadas quando da detecção de um foco da praga em território amapaense ou qualquer unidade federativa do Brasil.
- Distribuiçao geográfica da Praga Bactrocera carambolae (geo-referenciadas) no país.
- Implementaçao do Plano de Vigilancia para outras especies de Bactrocera exóticas no país.
- Essas informações coletadas servem para apoiar as negociações brasileiras de exportação de frutas e corroborar com as informações contidas na Instrução Normativa n. 52, de 20 de novembro de 2007 (BRASIL, 2007).

Conclusiones
- Essas informações coletadas servem para apoiar as negociações brasileiras de exportação de frutas e corroborar com as informações contidas na Instrução Normativa n. 52, de 20 de novembro de 2007 (BRASIL, 2007).
- O MAPA vem controlando a praga nos últimos 16 anos, prevenindo sua entrada nos países da América do Sul que estão inseridos no Comitê de Sanidade Vegetal do Cone Sul, Comitê Andino, assim como nos países da América Central. As ações de controle da praga no Amapá que tem como base os levantamentos evitam a dispersão da *Bactrocera carambolae* e seu ingresso nos estados produtores e exportadores de manga, citrus, goiaba, carambola, acerola dentre outros.
- As ações de controle e erradicação possibilitam a garantia de qualidade dos produtos no mercado interno e a garantia das exportações no agronegócio da fruticultura, com uma área plantada em torno de 2,5 milhões de hectares, representando uma estimativa de cinco milhões empregos diretos e indiretos.

Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:

Informe

(Disponível em http://sistemasweb.agricultura.gov.br/sislegis/action/detalhaAto.do?method=consultarLegislacaoFederal).
Acesso em 13/02/2012 – IN 52/2007 e Decreto 2226/1997 e Decreto nº 24.114, de 12 de abril de 1934; Decreto nº 5.741, de 30 de março de 2006, IN nº 52, de 20.11.2007

GODOY, M.J.S., PACHECO, W.P, MALAVASI. 2011. *Moscas –das –Frutas quarentenárias para o Brasil, Amapá*: Embrapa Amapá, p 125-127.

GODOY, M.J.S., PACHECO, W.P., PORTAL.R.R., PIRES. J.M; MORAES, L.M. 2011**.** *Programa Nacional de Erradicação da Mosca-da-carambola, Amapá*: Embrapa Amapá, p 135-148.

MALAVASI, A. Mosca da Carambola, *Bactrocera carambolae* (Díptera Tephritidae). In: VILELA, E. F., ZUCCHI, R. A., CANTOR, F. (Ed.). *Histórico e impacto das pragas introduzidas no Brasil.* Ribeirão Preto, Holos, 2001. p. 39-41.

SAUERS-MÜLLER, A. van. Host plants of the carambolae fruit fly, *Bactrocera carambolae* Drew & Hancock (Diptera: Tephritidae), in Suriname, South America. *Neotropical Entomology***,** Londrina, v. 34, n. 2, p. 203-214, 2005.

USDA. 1995. *Viabilidade econômica da erradicação da mosca-da-carambola (Bactrocera carambolae) na America do Sul*. Washington, DC, 37 p.

CHILE

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Título de la actividad:	Control Obligatorio de cancro bacteriano del kiwi ' *Pseudomonas syringae* pv. *actinidae*'
Resumen (250 palabras):	Debido a la epifitia presentada en Italia y Nueva Zelanda a la plaga de la cancrosis bacteriana del kiwi, causada por *Pseudomonas syringae* pv. *actinidae*, el SAG a través del Subdepto. de Vigilancia y Control Oficial Agrícola, realizó vigilancia específica a cultivos de kiwi localizados en la zona productora de Chile con el objetivo de ratificar la presencia o ausencia de esta plaga en el país. De estar presente y dada la importancia de esta bacteria, el SAG establecería el Control Obligatorio. Realizada la vigilancia durante la primavera del 2011 y otoño del 2012, el SAG identificó esta plaga en 1 predio localizado en la región del Maule. Producto de lo anterior, el SAG estableció el Control Obligatorio para esta Plaga a través de la Resolución N° 5.655. Desde esa fecha el SAG está estableciendo medidas de control en los predios positivos y medidas de preventivas en las zonas libres a la plaga. Toda esta actividad a contado con el apoyo del sector privado, aportando recursos técnicos y financieros, que han permitido responder en forma oportuna al control de esta plaga.
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	Se realizó una vigilancia específica, dirigida a los cultivos de kiwi en la zona productora del país cuyo objetivo fue ratificar la presencia o ausencia de esta plaga en el país y de estar presente identificar la distribución espacial de esta plaga en el país.
Resuma el motivo por el que se adoptó la medida de vigilancia:	Se adopto la vigilancia para ratificar el estatus de esta plaga en el país, ya sea su presencia o ausencia en la zona productora de kiwi en Chile.
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	El resultad fue identificar la zona afectada del país, lo cual le permitió al SAG establecer el control obligatorio para esta plaga. En los focos establecer las medidas de control y en las zonas libres establecer medidas preventivas.

Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:

[Inicie aquí la descripción – extensión máxima de 3 páginas]

El SAG de Chile a través de la División Protección Agrícola y Forestal y por medio del Subdepto. Vigilancia y Control Oficial Agrícola realiza vigilancia general y especifica a todo el recurso hortofrutícola nacional a lo largo del país. Las líneas de acción son la vigilancia agrícola son: Vigilancia Agrícola a los rubros relevantes o en expansión en las distintas zonas del país. Trampeo agrícola utilizando trampas de feromonas y tableros amarillos y la Denuncia fitosanitaria orientada a la comunidad productiva y científica. Además, se realizan los Controles Oficial a plagas presentes relevantes tales como Plum Pox Virus (PPV), *Lobesia botrana*, *Psedomonas syringae* pv. *actinidae*, Plagas del cultivo de la papa, etc.

Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:
1. [ej., Artículo de noticias: *Utopia successfully averts major pest outbreak of Pestifera majora*. Food supply safe. The Utopia Chronicle, 12 de diciembre de 2018] 2. [ej., artículo de revista científica] 3. [ej., informe de la ONPF] 4. [ej., enlaces web] 5. [ej., fotografías u otros formatos multimedia] …Etc. Ver www.sag.gob.cl http://www.sag.cl/opendocs/asp/pagDefault.asp?boton=Doc49&argInstanciaId=49&argCarpetaId=2298&argTreeNodosAbiertos=(2298)(-49)&argTreeNodoSel=2088&argTreeNodoActual=2298 http://www.sag.cl/OpenDocs/asp/pagDefault.asp?boton=Doc49&argInstanciaId=49&argCarpetaId=1&argTreeNodosAbiertos=(0)&argTreeNodoSel=1&argTreeNodoActual=1

COLOMBIA

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Título de la actividad:	Actualización del Directorio de patógenos y enfermedades de plantas de importancia económica en Colombia.
Resumen (250 palabras):	En el presente año, el Instituto Colombiano Agropecuario (ICA) junto a la comunidad científica del país actualiza el directorio de patógenos y enfermedades de las plantas de importancia económica en Colombia, con el fin de establecer el estatus fitosanitario del país y fortalecer e impulsar la vigilancia en el sector agrícola. La actualización del directorio de patógenos y enfermedades de las plantas de importancia económica en Colombia, permitirá la divulgación del estatus fitosanitario del país, aumentará la capacidad de respuesta tanto a usuarios internos como a cuestionarios de información requerida por otras Organizaciones Nacionales de Protección Fitosanitaria (ONPF) y facilitará la admisibilidad de productos en fresco a los diferentes destinos. De igual manera, permitirá el establecimiento y actualización de reglamentaciones y requisitos de exportación e importación y cumplimiento de las mismas, evitando la introducción de nuevos patógenos que puedan producir un impacto económico en los cultivos y crear planes de vigilancia que permitan el establecimiento y mantenimiento de áreas libres y de baja prevalencia de plagas. Por otro lado, Colombia también necesita información relativa de la situación de patógenos y enfermedades presentes, para contribuir a la planificación de los métodos de prevención y control de las enfermedades en los cultivos y viveros y generar alertas para evitar su diseminación.
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	Vigilancia General
Resuma el motivo por el que se adoptó la medida de vigilancia:	Aunque en el país existen muchas entidades especializadas en la protección de los cultivos y en la investigación de diferentes aspectos de su agronomía: Cenicafé, Cenicaña, Fedearroz, Cenipalma entre otros; es importante generar un documento donde se pueda relacionar los diferentes organismos fitopatógenos que atacan los diferentes cultivos de importancia económica en Colombia. Los documentos relacionados con fitopatógenos y enfermedades que se han publicado en el país no son muy abundantes y son obras que probablemente quedan desactualizadas rápidamente debido a los cambios en la nomenclatura taxonómica de los patógenos y a la introducción día a día de nuevas plantas de interés económico para el país. Lo mencionado hace que se presenten complicaciones a la hora de establecer y actualizar medidas fitosanitarias a nivel de exportación e importación, generar alertas fitosanitarias y planes de contingencia ante la entrada de patógenos y enfermedades ausentes en territorio colombiano. También ocasiona obstáculos en el momento de

	determinar las directrices en los diferentes manejos integrados de plagas.
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	Obtener información relativa a la situación de patógenos y enfermedades es de suma importancia para los análisis de riesgos, el establecimiento de reglamentaciones de exportación e importación, el cumplimiento de las mismas y el establecimiento y mantenimiento de áreas libres de plagas.

Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:

Primera fase: Recopilación de información científica y confiable de acuerdo a los parámetros establecidos por la NIMF 8 (Tiempo de duración: 1 año)

Ámbito de influencia
Todos los departamentos en donde se hayan realizado registros de enfermedades.

Objetivo general
Actualizar y determinar a la fecha, los patógenos y enfermedades en los cultivos de importancia económica en Colombia.

Objetivos específicos

- Disponer de información sobre los patógenos presentes y no presentes en el país en los cultivos de importancia económica en el país.
- Aclarar la situación de los reportes dudosos que fueron publicados en el directorio de patógenos y enfermedades de las plantas de importancia económica en Colombia del año 1999.
- Implementar un software para el almacenamiento de registros de las enfermedades causadas por hongos, bacterias, nematodos, fitoplasmas y virus que afectan las principales especies agrícolas y forestales del país.
- Actualizar la nomenclatura taxonómica de los patógenos y especies de plantas registrados en el directorio.
- Conocer la distribución geográfica de los patógenos que afectan las especies agrícolas y forestales del país.

Instituciones cooperantes y ejecutoras

- Universidad Nacional de Colombia, Sede Medellín Facultad de Ciencias Agropecuaria:

Actividades:

Se realizará una búsqueda de registros a nivel nacional donde se reporten los patógenos y enfermedades asociadas a cada una de las especies de importancia económica en el país. La búsqueda se realizará de acuerdo a lo establecido por los parámetros de la NIMF N°8

Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:

1. [ej., Artículo de noticias: *Utopia successfully averts major pest outbreak of Pestifera majora*. Food supply safe. The Utopia Chronicle, 12 de diciembre de 2018]
2. [ej., artículo de revista científica]
3. [ej., informe de la ONPF]
4. [ej., enlaces web]
5. [ej., fotografías u otros formatos multimedia]

…Etc.

CUBA

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Título de la actividad:	Sistema de Vigilancia Fitosanitaria en la República de Cuba
Resumen (250 palabras):	La ONPF de Cuba, representada por el Centro Nacional de Sanidad Vegetal (CNSV), cuenta con una estructura funcional, de alcance territorial, cuyas células básicas lo constituyen los Puestos de Frontera de la Cuarentena Exterior (PFCE), que atienden 41 Puntos de Ingreso que cubren la totalidad de los puertos aéreos y marítimos abiertos al tráfico internacional y una red de 73 Estaciones de Protección de Plantas (EPP), desde donde se ejerce la actividad de vigilancia, regulatoria, de control y capacitación fitosanitaria, y tiene como soporte científico al Instituto de Investigaciones de Sanidad Vegetal (INISAV), una red conformada por 14 Laboratorios Provinciales de Sanidad Vegetal (LAPROSAV), a la que se suman Instituciones y centros de investigación de CITMA, el MES y el propio MINAG, las que conforman en su conjunto el Sistema Estatal de Sanidad Vegetal; dicha estructura se considera apropiada y bien representada para ejercer la vigilancia fitosanitaria. La aplicación del procedimiento de vigilancia nos ha permitido en el tiempo acceder al seguimiento y la detección temprana de plagas, mitigando el negativo impacto económico y ambiental asociado a su introducción y desarrollo en los diferentes ecosistemas, posibilitando una conducción inteligente de la Vigilancia Fitosanitaria, con una relación Costo – Beneficio aceptable. Además ha facilitado la adopción de las acciones correctivas necesarias para suprimir las Brechas de Detección existentes en el menor plazo posible.
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	El Centro Nacional de Sanidad Vegetal en su carácter de ONPF, realiza anualmente un plan de encuestas especificas de plagas reglamentadas, que se suman al sistema de vigilancia general que se ejecuta nacionalmente.
Resuma el motivo por el que se adoptó la medida de vigilancia:	El sistema de vigilancia cuarentenaria en Cuba cumple el objetivo de dar seguimiento y propiciar la detección temprana de plagas reglamentadas, con prioridad sobre aquellas que están presentes o son de reciente reporte en la región y actualizar el estatus de plagas de distribución limitada en nuestro país, con la finalidad de establecer las regulaciones pertinentes para evitar o retardar su introducción y/o diseminación
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	El sistema de vigilancia aplicado en Cuba ha permitido en primer lugar mantener actualizadas las regulaciones de cuarentena domestica, con ejemplos concretos de mitigación del impacto económico derivado del control y el retardo de la diseminación de importantes plagas, el conocimiento de la situación fitosanitaria del país y los aportes a la ciencia relacionados con la documentación de nuevas especies de plagas y hospedantes
Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:	
[Inicie aquí la descripción – extensión máxima de 3 páginas] **SISTEMA DE VIGILANCIA FITOSANITARIA EN CUBA** Cuba por su condición insular posee condiciones excepcionales para la aplicación exitosa de las medidas y	

procedimientos clásicos de la Cuarentena Vegetal, entre ellos los relacionados con la vigilancia fitosanitaria, cuyas acciones tienen un protagonismo esencial en la preservación de la biodiversidad y el patrimonio agroforestal.

La ONPF de Cuba, representada por el Centro Nacional de Sanidad Vegetal (CNSV), cuenta con una estructura funcional, de alcance territorial, cuyas células básicas lo constituyen los Puestos de Frontera de Cuarentena Exterior (PFCE), que atienden 41 Puntos de Ingreso que cubren la totalidad de los puertos aéreos y marítimos abiertos al tráfico internacional y una red de 73 Estaciones de Protección de Plantas (EPP), desde donde se ejerce la actividad de vigilancia, regulatoria, de control y capacitación fitosanitaria, y tiene como soporte científico al Instituto de Investigaciones de Sanidad Vegetal (INISAV), una red conformada por 14 Laboratorios Provinciales de Sanidad Vegetal (LAPROSAV), a la que se suman Instituciones y centros de investigación de CITMA, el MES y el propio MINAG, las que conforman en su conjunto el Sistema Estatal de Sanidad Vegetal; dicha estructura se considera apropiada y bien representada para ejercer la vigilancia fitosanitaria.

En el contexto legal se cuenta con un adecuado soporte para ejercer la actividad funcional, de vigilancia y regulatoria, en beneficio de la protección fitosanitaria del país.

La vigilancia constituye un objetivo prioritario para la Sanidad Vegetal, enfrascada en prevenir la introducción y diseminación de plagas; su alcance va desde las inspecciones que se realizan en origen a cargo de inspectores cubanos, hasta la que se ejecutan en los Puntos de Ingreso y en el interior del país, mediante encuestas de carácter nacional o territorial.

Se sigue el principio de que la vigilancia es un ejercicio continuo y la utilidad de sus resultados dependen del nivel de actualidad que tengan; teniendo en cuenta que se trata de una práctica costosa, es implementada con racionalidad y con una frecuencia correspondiente al nivel de riesgo, estatus agro productivo y capacidad para preservar la condición fitosanitaria del lugar donde se aplica, de manera que tenga un razonamiento diferenciado, que contemple el mayor nivel de intervención (inspección y toma de muestras) donde se aprecie el mayor nivel de riesgo.

Se priorizan por tanto las áreas de mayor riesgo y vulnerabilidad, sin dejar de atender la representatividad territorial y en este orden las acciones de encuesta establecen un tratamiento diferenciado para cada sitio geográfico.

El ordenamiento de la vigilancia se realiza mediante el uso del sistema de Cuadrantes Cartográficos (mapas 1:25000), con la finalidad de organizar, seguir el curso y evaluar los resultados, así como la adecuada localización y seguimiento de brotes de plagas que puedan ocurrir; a partir de estas premisas, la organización de la vigilancia en cada localidad debe cumplir los siguientes requerimientos:

1. Evaluar la abundancia de los principales cultivos y plantas silvestres, hospedantes de las plagas objeto de la vigilancia.
2. Identificar las Vías de Entrada potenciales de las plagas que son objeto de la vigilancia y su incidencia en cada uno de los Cuadrantes Cartográficos.
3. Categorizar el Riesgo Fitosanitario, resultante de la sumatoria de Vías de Entrada y la Abundancia de Hospedantes en cada Cuadrante Cartográfico.
4. Establecer las Acciones de Vigilancia en correspondencia con la Categoría de Riesgo Fitosanitario y las Brechas de Detección existentes.

La Categorización del Riesgo Fitosanitario Territorial es un procedimiento de análisis que se ejecuta al nivel de las EPP, con la activa participación de los técnicos del sector productivo y validado por las Direcciones Provinciales de Sanidad Vegetal. Es un proceso dinámico, sujeto a los cambios que se producen en la composición y valor relativo de las Vías de Entrada que inciden en cada localidad, el movimiento de las plagas, las modificaciones del escenario productivo, entre otros factores y por tanto es objeto de reexamen siempre que dichas condiciones se modifiquen.

El propósito de la Categorización del Riesgo Fitosanitario Territorial, es practicar un sistema de Vigilancia diferenciado en cada localidad, correspondiente con su nivel de riesgo, por lo que de acuerdo con sus resultados deben establecerse las prioridades e intensidad de la vigilancia.

Una vez realizada la categorización territorial del Riesgo Fitosanitario, la misma se constituye en el documento básico para la implementación de las acciones de vigilancia en el territorio objeto de análisis; de manera que cada

encuesta o monitoreo que se emprende responda al criterio de riesgo preestablecido.

En Cuba hemos utilizado exitosamente el concepto de las plantas trampas para la estructuración de los sistemas de vigilancia. A tal fin en los Cuadrantes categorizados como de Muy Alto Riesgo, se seleccionan Puntos de Monitoreo Permanente con Hospedantes Preferenciales para las plagas objeto de la vigilancia, los que se evalúan estacionalmente durante el año, con una frecuencia que se corresponde con el nivel de riesgo presente y las características de las plagas que se vigilan. Dichos puntos de monitoreo están debidamente caracterizados e inventariados por las EPP que los atienden y se controla la fecha y resultados de su evaluación y muestreo, conforme a formatos preestablecidos.

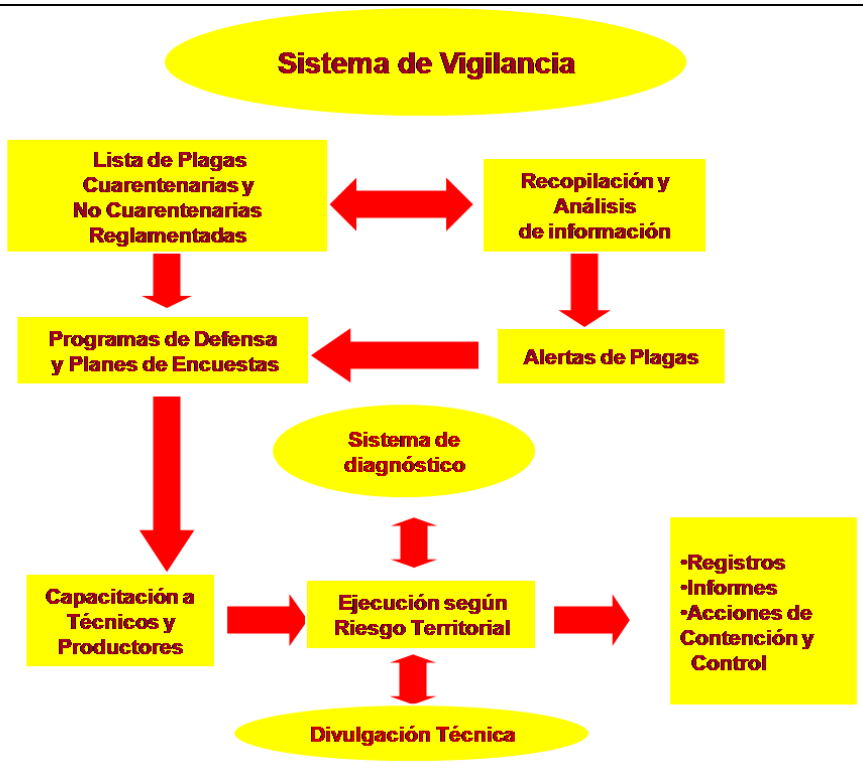
Anualmente se elabora un Programa de Encuestas con sus correspondientes Metodologías, que responde a criterios de riesgo y representatividad geográfica. Dichas metodologías están disponibles en todas las EPP y constituyen documentos rectores de obligatoria aplicación; por tanto su conocimiento y consulta, previo al inicio de cualquier ejercicio de vigilancia, es una premisa indispensable en el proceso de planificación y organización de la actividad de vigilancia.

Teniendo en cuenta que no existe vigilancia sin flujo de muestras hacia un centro de diagnóstico apropiado, el Sistema Estatal de Sanidad Vegetal en Cuba tiene establecido la estratificación del diagnóstico, en correspondencia con el tipo de plaga y la complejidad de la técnica requerida; de manera tal que el procedimiento establece las instancias a donde deben ser llevadas las muestras para ser diagnosticadas. En el diagnóstico de plagas participan activamente todas las unidades del Sistema, desde las Estaciones de Protección de Plantas y los Puestos de Frontera de Cuarentena Exterior que realizan diagnósticos primarios, hasta el INISAV y el LCCV, como instancias máximas de su desempeño, transitando por los 14 Laboratorios Provinciales de Sanidad Vegetal; de otra manera sería imposible dar respuesta a la cuantía de muestras que cada año son procesadas en función de la vigilancia de plagas en todo el país.

Las muestras que fluyen hacia los centros de diagnóstico, deben estar acompañado por la información básica sobre la identidad y lugar de procedencia, especificando el Cuadrante Cartográfico, lo que se corresponde con las pautas establecidas por la NIMF No 6. En el caso de las plagas cuarentenarias, su diagnóstico tiene que ser confirmado obligatoriamente por el Laboratorio Central de Cuarentena Vegetal, entidad rectora del mismo, salvo en los casos en que expresamente y de manera previa se haya autorizado su descentralización a otro laboratorio.

Para la aplicación de estas acciones damos una importancia trascendental al análisis de la situación del escenario agro productivo, las transformaciones que ocurren en el mismo, el conocimiento que tiene el agricultor de las plagas sujetas a vigilancia, sus antecedentes (sitios inspeccionados, flujo de muestras y resultados de ejercicios de vigilancia realizados con anterioridad), así como la capacidad del dispositivo técnico en cada localidad, por cuanto cualquiera de estos factores se puede constituir en brechas de detección, que afecten sensiblemente la calidad y resultados de la vigilancia.

La adopción del procedimiento descrito, nos ha permitido en el tiempo acceder al seguimiento y la detección temprana de importantes plagas, mitigando el negativo impacto económico y ambiental asociado a su introducción o invasión de nuevos ecosistemas, posibilitando una conducción inteligente de la Vigilancia Fitosanitaria, con una relación Costo – Beneficio aceptable. Además ha facilitado la adopción de las acciones correctivas necesarias para suprimir las Brechas de Detección existentes.



Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:

1. [ej., Artículo de noticias: *Utopia successfully averts major pest outbreak of Pestifera majora*. Food supply safe. The Utopia Chronicle, 12 de diciembre de 2018]
2. [ej., artículo de revista científica]
3. [ej., informe de la ONPF]
4. [ej., enlaces web]
5. [ej., fotografías u otros formatos multimedia]

…Etc.

DOMINICAN REPUBLIC

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Título de la actividad:	**Situación actual del HLB en la República Dominicana**
Resumen (250 palabras):	Esta bacteria, cuyo vector es *Diaphorina citri* se descubrió por primera vez en la india en el siglo XV111, anteriormente, el patógeno estaba probablemente presente en plantas nativas de rutáceas y cuando los cítricos se plantaron en áreas nuevas, los insectos psílidos pudieron haberles transmitido la enfermedad. El HLB fue reportado por citricultores del sureste de China a finales del siglo XIX. En África del Sur esta enfermedad fue reportada por primera vez en los años veinte del siglo pasado. La existencia de esta enfermedad en Asia y África propició que a través de los años se dispersara hacia varios países de ambos continentes. *Diaphorina citri* fue detectada en el año 2001 en la zona metropolitana de Santo Domingo. Posteriormente fue localizada en la Provincia de San Cristóbal en la Zona Sur y en Hato Mayor en el Este del País. Actualmente se encuentra diseminado en todo el territorio nacional. El HLB fue detectado en el 2008 en los Municipios de Luperón e Imbert en la zona Norte del país. En la actualidad se ha reportado en 14 provincias de las 32 que componen la República Dominicana. Por Resolución 47/2008, se creó el Programa Nacional de Manejo Integrado del Huanglongbing de los Cítricos y el Comité Nacional de Manejo Integrado de HLB, cuyas ejecutorias han sido orientadas en tres componentes: Capacitación de los técnicos y productores, monitoreo del insecto vector (*Diaphorina citri*) y el HLB, erradicación de plantas afectadas Recientemente el país recibió una donación por parte del USDA/APHIS y con la mediación de OIRSA 1,800 yemas de mandarina, naranja y lima persa, con fines de obtener material sano
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	Vigilancia específica
Resuma el motivo por el que se adoptó la medida de vigilancia:	La medida de vigilancia fue adoptada debido a la importancia de la enfermedad a nivel nacional y mundial y por la introducción de una plaga exótica que afecta la industria citrícola de la República Dominicana. El País mantiene una vigilancia para la *D. citri* y la bacteria que transmite desde muchos años antes de su introducción al país. Esta vigilancia estuvo orientada hacia la capacitación del personal técnico, que permitiera la detección a tiempo de la enfermedad y su vector, monitoreo constante del vector y la enfermedad, sus enemigos naturales.
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	Determinación a tiempo del desarrollo de la enfermedad y su vector; mejores controles, reducción de costos por controles; retardo de su distribución

Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:
Con la finalidad de lograr una eficiencia en el manejo de la enfermedad Huanglongbing de los Cítricos, se puso en ejecución un proyecto para el manejo integrado de la enfermedad. Este se ha orientado en tres componentes básico, aunque no únicos, los cuales han sido: **1. Capacitación** Ciclos de conferencias dirigidas a productores, viveristas y técnicos, tanto del sector público como privado. Además Seminarios de carácter internacional e internacional, donde se han tomado en cuenta ▪ Reconocimiento y Manejo del HLB ▪ Identificación, Biología y Control de *Diaphorina citri* ▪ Aspectos Cuarentenarios y Plan de Acción para el Manejo del HLB ▪ Importancia de la Certificación de Plantas Cítricas ▪ Manejo seguro de plaguicidas en cítricos ▪ Control químico de *Diaphorina citri* ▪ Elaboración de afiches, Brochurs, como material divulgativo ▪ Elaboración de cuñas radiales y televisivas **2. Monitoreo de la enfermedad y su vector** Programa de monitoreo en todo el territorio nacional, realizándose los diagnóstico de la enfermedad por la técnica PCR de plantas afectadas así como del vector **3. Erradicación de plantas afectada** Confirmada la presencia del HLB en el país, los técnicos del Departamento de Sanidad Vegetal del Ministerio de Agricultura localizados en todo el país, iniciaron los trabajos de eliminación de plantas que resultan positivas **Siembra de plantas certificadas** **Control químico del vector**
Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:

MEXICO

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Tel:	52 (01) 50 90 30 00 opción 1 Ext. 51426, 51427 y 51371

Título de la actividad:	Programa de Vigilancia Epidemiológica Fitosanitaria
Resumen (250 palabras):	El Gobierno Federal, a través de la Dirección General de Sanidad Vegetal del Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria en el marco de sus prioridades y estrategias 2008-2012 estableció: la aplicación de un programa de vigilancia epidemiológica con apoyo de Organismos Auxiliares de Sanidad Vegetal sobre las plagas que amenazan los cultivos de los principales sistemas producto agrícola, a través de la integración y operación de un Programa de Vigilancia Epidemiológica Fitosanitaria para detectar y atender oportunamente los brotes de plagas agrícolas, así como determinar y actualizar en forma permanente el estatus fitosanitario de las plagas reguladas y de las amenazas fitosanitarias, consideradas como ausentes y/o presentes en nuestro país, en los niveles local, estatal y regional.
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	Se realizan 2 tipos de vigilancia: 1. **Vigilancia Externa**: • Orientada a la obtención, registro y análisis de información fitosanitaria internacional. • Orientada al análisis de eventos metereológicos que pueden introducir o dispersar plagas. 2. **Vigilancia Interna**: Se realiza con el apoyo de los Órganos de Coadyuvancia para establecer: • Una red de monitoreo nacional a través de Comités Estatales de Sanidad Vegetal. • Red de Información (Laboratorios Fitosanitarios aprobados) • Inspección en puntos de ingreso (OISA's)
Resuma el motivo por el que se adoptó la medida de vigilancia:	El Programa de Vigilancia Epidemiológica Fitosanitaria ha permitido tener un conocimiento actualizado de la situación fitosanitaria en México y a la vez es una herramienta estratégica y de vital importancia para los productos agrícolas considerando que la sanidad vegetal como un activo público es un elemento de seguridad nacional. Por ello, el SENASICA a través de la Dirección General de Sanidad Vegetal, implementó la vigilancia epidemiológica fitosanitaria, con recursos del componente de sanidad e inocuidad del programa soporte, conscientes de que la prevención, es la mejor vía en la protección de los cultivos y en la consecuente preservación del estatus fitosanitario nacional, para detectar y atender en forma oportuna los brotes de plagas, así como factores de riesgo que afecten el patrimonio agrícola del México.
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	La preservación de nuestro patrimonio agrícola generador de alimentos, así como la preservación de las cosechas y de otras plantas útiles, está relacionada con la seguridad alimentaria de la población y su bienestar general. Por ello, **la vigilancia epidemiológica** fitosanitaria, ha permitido la identificación y verificación de la incidencia, dispersión y comportamiento de plagas reglamentadas mediante la detección temprana y delimitación de posibles introducciones de plagas que no existen en el país y que presentan posibilidades de provocar daños de consecuencias económicas

	en la agricultura. Toda esta información generada por la vigilancia epidemiológica fitosanitaria, ha sido útil para prevenir el riesgo de introducción y dispersión de plagas o bien ha permitido tomar decisiones sobre medidas de manejo de las mismas cuando se estimen necesarias para su control, confinamiento y/o erradicación a fin de lograr establecer zonas libres de plagas que propicien la calidad fitosanitaria de los cultivos, bajo un enfoque epidemiológico, ya que la sanidad vegetal como un bien público, representa una ventaja estratégica en las negociaciones comerciales. En este sentido, la vigilancia epidemiológica fitosanitaria, ha permitido: • Detectar de manera oportuna, así como identificar y verificar la incidencia, dispersión y comportamiento de plagas de alto potencial de ingreso al país. • Conocer el panorama fitosanitario de manera oportuna a través de mapas de disposición de plagas y de riesgo fitosanitario. • Proporcionar el sustento técnico-científico a la planeación, programación y evaluación de acciones en materia de sanidad vegetal para quienes formulan y toman políticas de alto impacto fitosanitario.
Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:	
El sistema de vigilancia de plagas en México, se basa en los siguientes elementos: • Definición y/o actualización de la Lista de plagas reglamentadas, la cual es importante ya que es un insumo muy importante para el sistema de priorización. • Uso de un Sistema de priorización fitosanitaria, el cual permite establecer en forma priorizada la lista de plagas que ameritan vigilarse, según los cultivos más importantes. • Según la lista de plagas, se elaboran los programas de trabajo anuales según lineamiento técnico (estrategias) para las plagas a vigilar en cada Estado y con base en la disposición de recursos financieros que para ello se dispongan. • Como apoyo para los técnicos en la vigilancia de plagas se elaboran fichas técnicas, así como una guía de síntomas y daños de las mismas como una referencia visual o guía para el campo. Adicionalmente, se realizan capacitaciones presenciales o gotowebinar con el apoyo de especialistas según las plagas que se vigilan. • Ante la sospecha de la presencia de una plaga se toman muestras y se envían a los laboratorios de referencia fitosanitaria. • Así mismo, se establece una supervisión oficial a la operación de la vigilancia de plagas por Estado con la finalidad de fortalecer la detección oportuna de plagas reglamentadas.	
Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:	
Para una referencia, se puede consultar el siguiente link: http://www.senasica.gob.mx/?id=2838	

PANAMA

Nombre:	
Organización:	
Dirección:	Sanidad Vegetal Ministerio de Desarrollo Agropecuario
Correo electrónico:	
Tel:	220-7979

Título de la actividad:	OPERATIVO INTENSIVO DE MUESTREO DE FRUTOS DE CUCURBITACEAS PARA LA DETECCIÓN DE ESTADIOS INMADUROS DE *ANASTREPHA GRANDIS*, EN LA PROVINCIA DE DARIEN
Resumen (250 palabras):	Como parte de las actividades que viene desarrollando el Programa Nacional Moscas de la Fruta en el área Este del país se realizó un operativo intensivo de muestreo de frutos de cucurbitáceas para detectar inmaduros de Anastrepha grandis. Dentro de las actividades desarrolladas fue la aplicación de insecticidas cebo en las fincas positivas y en el entorno de las mismas; lo cual involucró la aspersión de un total de 1,737 árboles de frutales de traspatio. Además, de manera simultaneas se efectuaron 15 encuestas sobre consumo de zapallo en las áreas de detección, con el objetivo de obtener indicios sobre el fruto hospedante de la *A. grandis*. En total se trabajo con 296 productores. También se hizo muestreo de fincas, expendios de alimento y cultivos comerciales; revisándose en total 46 sitios, en donde se realizaron entrevistas y muestreos de frutos. Durante el desarrollo de esta actividad se rastrearon, cosecharon y picaron unas 302.5 libras de frutas, en donde predominó el meloncillos silvestre con 276 lbs., zapallo con 23.5 lbs. y 3 lbs. de balsamina. Finalmente anotar que esta parcela es cultivada cada año. Como parte de la estrategia se consensuó la instalación de una ruta temporal de trampas a todo lo largo de la quebrada del Tirao, involucrando sitios dentro y fuera de dicha parcela. En total se instalaron 18 trampas Multilure, utilizando atrayentes de mayor potencial de atracción como lo son CERATRAP y Biolure (Putrecina y Acetato de Amonio), con el objetivo de determinar si existen poblaciones de adultos de la plaga en las riveras de esta quebrada y que eventualmente se estén criando en los hospedantes presentes en las áreas de cultivos antes señalados; los cuales posteriormente migren con la ayuda de los vientos predominantes o en busca de hospedantes, a los asentamientos humanos próximos. Además de las actividades incluidas en el operativo, se dio seguimiento a las programaciones regulares de atención y servicio a 11 rutas que involucran 153 trampas; incluyendo las ubicadas en los márgenes los ríos (Tupiza, Tuquesa, El Salto, El Corozal, Río Chico, Punta Grande y Laja Blanca); exceptuando la de Bocas de Cupe, que por conflictos de guerrilleros, no se pudo ejecutar.
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	ESTE TRABAJO FUE RRELIZADO PARA UNA ENCUESTA ESPECÌFICA. PARA PLAGA , A. grandis
Resuma el motivo por el que se adoptó la medida de vigilancia:	Encontrar inmaduros de *Anastrepha grandis*, que desde que se detectó

	la plaga en febrero de 2009, no se han encontrado.
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	**Resultados:** • 46 sitios visitados en 9 comunidades ubicadas dentro y en el entorno de áreas con antecedentes de capturas positivas de *A. grandis* (parcelas comerciales, traspatios, mercaditos de verduras, vertederos, fondas y restaurantes; así como también áreas silvestres con presencia de hospedantes). Todos estos puntos fueron geo referenciados para su inclusión en el sistema de información geográfica del programa moscas de la fruta. • 24 muestras de frutas de cucurbitáceas colectadas pertenecientes a 8 tipos diferentes de hospedantes potenciales: 6 cultivables (zapallo, pepino, calabazas, melón, sandía) y 3 silvestres (estropajo, balsamina y meloncillo) • 559.35 libras de frutas picadas para la detección de larvas de *A. grandis* • 177 desplegables y 177 hojas volantes distribuidas como parte del operativo de divulgación • No se detectaron estadíos inmaduros (larvas de *A. grandis*) durante todo el operativo. • Identificación de una finca con condiciones adecuadas para la cría y reproducción de A. grandis y su posterior dispersión a comunidades circunvecina, en donde se reportan capturas positivas repetitivas de la plaga. • Instalación de ruta temporal consistente de 18 trampas multilure cebadas con CERATRAP y biolure, en los márgenes de la quebrada del Tirao. Se estará a la espera de los resultados de la primera revisión. • Aplicación de insecticida cebo para bajar población de adultos de *A. grandis*, en las fincas positivas y sus entornos. • Servicio y mantenimiento de 153 trampas de las rutas establecidas. • En los cuadros adjuntos se presenta el resultado de los tres operativos efectuados durante el mes de enero, incluyendo tierra firme y el área de Garachiné. Además la información sobre el registro de instalación de trampas en los márgenes de la quebrada del Tirao, en el corregimiento de Agua Frías. *En total unos 221 sitios visitados en 54 comunidades, 1,006 libras de frutas picadas de 9 tipos diferentes de hospedantes potenciales: 6 cultivables (zapallo, pepino, calabazas, melón, sandía, chila) y 3 silvestres (estropajo, balsamina y meloncillo).* No se encontraron estados inmaduros de A. grandis
Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:	

[Inicie aquí la descripción – extensión máxima de 3 páginas]

Primeramente se realizan las encuestas de vigilancia en este caso de detección de una plaga siguiendo las indicaciones, luego se llenan los registros para que quede documentado el trabajo realizado por los técnicos de campo, si se encuentran muestras sospechosas son remitidas a un laboratorio de referencia para su diagnostico, posteriormente de ser positiva se procede a realizar los trabajos de eliminación o manejo de la plaga según el caso, verificación de su dispersión en una determinada área del país.

Se realizan reuniones con las instituciones gubernamentales y asociaciones de productores para informarle sobre el comportamiento de una plaga recién detectada y cuáles son los mecanismos a seguir para el manejo y control de la misma.

Adicional

Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:

1. [ej., Artículo de noticias: *Utopia successfully averts major pest outbreak of Pestifera majora*. Food supply safe. The Utopia Chronicle, 12 de diciembre de 2018]
2. [ej., artículo de revista científica]
3. [ej., informe de la ONPF]
4. [ej., enlaces web]
5. [ej., fotografías u otros formatos multimedia]

…Etc.

Nombre:	HARRY PEREZ ARMUELLES
Organización:	MIDA, DIRECCION NACIONAL DE SANIDAD VEGETAL
Dirección:	RIO TAPIA, TOCUMEN, PANAMÁ
Correo electrónico:	Harry_perez67@yahoo.com
Tel:	2207979

Título de la actividad:	OPERATIVO INTENSIVO DE MUESTREO DE FRUTOS DE CUCURBITACEAS PARA LA DETECCIÓN DE ESTADIOS INMADUROS DE *ANASTREPHA GRANDIS*, EN LA PROVINCIA DE DARIEN
Resumen (250 palabras):	Como parte de las actividades que viene desarrollando el Programa Nacional Moscas de la Fruta en el área Este del país se realizó un operativo intensivo de muestreo de frutos de cucurbitáceas para detectar inmaduros de Anastrepha grandis. Dentro de las actividades desarrolladas fue la aplicación de insecticidas cebo en las fincas positivas y en el entorno de las mismas; lo cual involucró la aspersión de un total de 1,737 árboles de frutales de traspatio. Además, de manera simultaneas se efectuaron 15 encuestas sobre consumo de zapallo en las áreas de detección, con el objetivo de obtener indicios sobre el fruto hospedante de la *A. grandis*. En total se trabajo con 296 productores.

	También se hizo muestreo de fincas, expendios de alimento y cultivos comerciales; revisándose en total 46 sitios, en donde se realizaron entrevistas y muestreos de frutos. Durante el desarrollo de esta actividad se rastrearon, cosecharon y picaron unas 302.5 libras de frutas, en donde predominó el meloncillos silvestre con 276 lbs., zapallo con 23.5 lbs. y 3 lbs. de balsamina. Finalmente anotar que esta parcela es cultivada cada año. Como parte de la estrategia se consensuó la instalación de una ruta temporal de trampas a todo lo largo de la quebrada del Tirao, involucrando sitios dentro y fuera de dicha parcela. En total se instalaron 18 trampas Multilure, utilizando atrayentes de mayor potencial de atracción como lo son CERATRAP y Biolure (Putrecina y Acetato de Amonio), con el objetivo de determinar si existen poblaciones de adultos de la plaga en las riveras de esta quebrada y que eventualmente se estén criando en los hospedantes presentes en las áreas de cultivos antes señalados; los cuales posteriormente migren con la ayuda de los vientos predominantes o en busca de hospedantes, a los asentamientos humanos próximos. Además de las actividades incluidas en el operativo, se dio seguimiento a las programaciones regulares de atención y servicio a 11 rutas que involucran 153 trampas; incluyendo las ubicadas en los márgenes los ríos (Tupiza, Tuquesa, El Salto, El Corozal, Río Chico, Punta Grande y Laja Blanca); exceptuando la de Bocas de Cupe, que por conflictos de guerrilleros, no se pudo ejecutar.
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	ESTE TRABAJO FUE RRELIZADO PARA UNA ENCUESTA ESPECÌFICA. PARA PLAGA , A. grandis
Resuma el motivo por el que se adoptó la medida de vigilancia:	Encontrar inmaduros de *Anastrepha grandis*, que desde que se detectó la plaga en febrero de 2009, no se han encontrado.
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	**Resultados:** • 46 sitios visitados en 9 comunidades ubicadas dentro y en el entorno de áreas con antecedentes de capturas positivas de *A. grandis* (parcelas comerciales, traspatios, mercaditos de verduras, vertederos, fondas y restaurantes; así como también áreas silvestres con presencia de hospedantes). Todos estos puntos fueron geo referenciados para su inclusión en el sistema de información geográfica del programa moscas de la fruta. • 24 muestras de frutas de cucurbitáceas colectadas pertenecientes a 8 tipos diferentes de hospedantes potenciales: 6 cultivables (zapallo, pepino, calabazas, melón, sandía) y 3 silvestres (estropajo, balsamina y meloncillo) • 559.35 libras de frutas picadas para la detección de larvas de *A. grandis* • 177 desplegables y 177 hojas volantes distribuidas como parte del operativo de divulgación • No se detectaron estadíos inmaduros (larvas de *A. grandis*) durante todo el operativo. • Identificación de una finca con condiciones adecuadas para la cría y reproducción de A. grandis y su posterior dispersión a

	comunidades circunvecina, en donde se reportan capturas positivas repetitivas de la plaga. • Instalación de ruta temporal consistente de 18 trampas multilure cebadas con CERATRAP y biolure, en los márgenes de la quebrada del Tirao. Se estará a la espera de los resultados de la primera revisión. • Aplicación de insecticida cebo para bajar población de adultos de *A. grandis*, en las fincas positivas y sus entornos. • Servicio y mantenimiento de 153 trampas de las rutas establecidas. • En los cuadros adjuntos se presenta el resultado de los tres operativos efectuados durante el mes de enero, incluyendo tierra firme y el área de Garachiné. Además la información sobre el registro de instalación de trampas en los márgenes de la quebrada del Tirao, en el corregimiento de Agua Frías. *En total unos 221 sitios visitados en 54 comunidades, 1,006 libras de frutas picadas de 9 tipos diferentes de hospedantes potenciales: 6 cultivables (zapallo, pepino, calabazas, melón, sandía, chila) y 3 silvestres (estropajo, balsamina y meloncillo).* No se encontraron estados inmaduros de A. grandis
Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:	
[Inicie aquí la descripción – extensión máxima de 3 páginas] Primeramente se realizan las encuestas de vigilancia en este caso de detección de una plaga siguiendo las indicaciones, luego se llenan los registros para que quede documentado el trabajo realizado por los técnicos de campo, si se encuentran muestras sospechosas son remitidas a un laboratorio de referencia para su diagnostico, posteriormente de ser positiva se procede a realizar los trabajos de eliminación o manejo de la plaga según el caso, verificación de su dispersión en una determinada área del país. Se realizan reuniones con las instituciones gubernamentales y asociaciones de productores para informarle sobre el comportamiento de una plaga recién detectada y cuáles son los mecanismos a seguir para el manejo y control de la misma. Adicional	
Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:	
1. [ej., Artículo de noticias: *Utopia successfully averts major pest outbreak of Pestifera majora*. Food supply safe. The Utopia Chronicle, 12 de diciembre de 2018] 2. [ej., artículo de revista científica] 3. [ej., informe de la ONPF] 4. [ej., enlaces web] 5. [ej., fotografías u otros formatos multimedia] …Etc.	

PARAGUAY

Nombre:	Derlis Willian Caballero González
Organización:	Servicio Nacional de Calidad y Sanidad Vegetal y de Semillas - SENAVE
Dirección:	Humaita 145 e/ Ntra. Sra. De la Asunción e Ind. Nacional, Edif. Planeta I, Asunción, Paraguay
Correo electrónico:	tacuaree@gmail.com
Tel:	595(21) 490096 - 595(21)490153

Título de la actividad:	Identificación de especies de moscas de la fruta de los géneros *Anastrepha* sp. y *Ceratitis* sp. en cultivo de mango (*Manguífera indica*), en el departamento de Cordillera.
Resumen (250 palabras):	En el periodo comprendido entre diciembre 2009 a abril 2010, fueron instaladas en parcelas de mango dos tipos de trampas para la captura de especimenes, la trampa Mac Phail con proteína hidrolizada y la Jackson con Trimedlure como atrayentes, todas ellas georeferenciadas, totalizando 196 trampas con una proporción de 2 trampas (1 Mac Phail y 1 Jackson) por finca que posea mayor de 10 plantas y en aquellas fincas que contaban con mayor de 1 ha, fueron instaladas 1 trampa por 1 há adicional. El presente trabajo tuvo como objetivo la Identificación de especies de moscas de la fruta de los géneros *Anastrepha* sp. y *Ceratitis* sp en cultivo de mango (*Manguifera indica*) en cinco distritos del Departamento de Cordillera
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	Vigilancia general y especifica
Resuma el motivo por el que se adoptó la medida de vigilancia:	Los objetivos de la medida de vigilancia eran: • Identificar especies de moscas de la fruta de los géneros Anastrepha sp. y Ceratitis sp., en el Departamento de Cordillera. • Determinar la fluctuación poblacional y distribución de especies de moscas de la fruta en el Departamento de Cordillera. - Ejecutar estrategias de control a fin de disminuir la población existente de especies de Moscas de la Fruta que tenga al mango como hospedante
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	Fueron identificados 15 especies de moscas de la fruta, *Anastrepha amita, Anastrepha barbielini, Anastrepha becki, Anastrepha bistrigata, Anastrepha dissimilis, Anastrepha elegans Anastrepha fraterculus, Anastrepha grandis Anastrepha montei, Anastrepha striata, Anastrepha pickeli, Anastrepha punctata Anastrepha serpentina, Anastrepha sororcula, y Ceratitis capitata.*

Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:

[Inicie aquí la descripción – extensión máxima de 3 páginas]

PLAN DE TRABAJO: IDENTIFICACION DE ESPECIES DE MOSCAS DE LA FRUTA DE LOS GENEROS *Anastrepha* sp. y *Ceratitis* sp EN PRODUCCION DE MANGO (*Manguifera indica*), EN EL DEPARTAMENTO CORDILLERA

INTRODUCCION

El presente Plan de trabajo se basa en la cooperación entre el Servicio Nacional de Calidad y Sanidad Vegetal y de

Semillas (SENAVE), el Instituto Interamericano de Cooperación para la Agricultura (IICA), sede Paraguay y el Departamento de Agricultura de los Estados Unidos, Servicio de Inspección de Enfermedades de Plantas y Animales, APHIS de los Estados Unidos de América.

OBJETIVO

OBJETIVO GENERAL

Identificar especies de Mosca de la Fruta en cultivo de mango (*Manguifera indica*) en el Departamento de la Cordillera.

OBJETIVO ESPECIFICO

Identificar especies de moscas de la fruta de los géneros *Anastrepha* sp. y *Ceratitis* sp. en el Departamento de Cordillera.

Determinar la fluctuación poblacional y distribución de especies de moscas de la fruta en el Departamento de Cordillera.

Ejecutar estrategias de control a fin de disminuir la población existente de especies de Moscas de la Fruta que tenga al mango como hospedante.

ZONAS DE EJECUCION - LOCALIZACIÓN

Las instalaciones de trampas se realizarán en el Departamento de Cordillera en los siguientes Distritos

Cuadro 1. Distritos y cantidad de productores involucrados al plan.

DISTRITO	CANTIDAD DE PRODUCTORES
Eusebio Ayala	30
Altos	12
Caacupé	29
Atyra	19
Piribebuy	12
TOTAL	102

Estas zonas de producción involucran a 31 compañías. El registro y censo de los productores involucrados fue realizado por técnicos de la Dirección de Extensión Agraria, DEAG, del Ministerio de Agricultura y Ganadería. Se anexa lista de productores.

ACTIVIDADES

1**. DE CAPACITACION**

Para técnicos y productores registrados y habilitados se realizaran capacitaciones sobre:

- Manejo Fitosanitario del cultivo de mango
- Control de Moscas de la Fruta.
- Ejecución del Plan de trabajo del Programa Detección de Mosca de la Fruta.
- Aplicación de Buenas Prácticas Agrícolas (BPAs) y Buenas Prácticas de Manufacturas (BPMs).

2. DE CAMPO

Para la implementación del Plan de trabajo en el campo se dispondrá de 2 técnicos permanentes, quienes realizarán las siguientes actividades:

- Instalación de una red de trampeo para Mosca de la Fruta de los géneros *Anastrepha* spp. y *Ceratitis* sp. en las fincas de los productores censados.
- Recebado de trampas tipo Mac Phail y Jackson en cultivos de mango (*Manguifera indica*), utilizando como atrayente Proteína hidrolizada con una frecuencia de cada 7 días y con Trimedlure cada 15 días.
- Georeferenciamiento de las trampas,
- Muestreo de frutos maduros para la detección de estados inmaduros de Moscas de la Fruta.

- Registro de los datos obtenidos asentados en la planilla, cuyo modelo se adjunta a este Plan.

La densidad a ser utilizada es de 2 trampas (1 Mac Phail y 1 Jackson) por finca que posea mayor de 10 plantas y en aquellas fincas que posean mayor de 1 ha. Serán instaladas 1 trampa por 1 ha Adicional.

Para la colocación de la trampa en el árbol se deberá tener en cuenta los siguientes aspectos:

a) Escoger un árbol con fruto por finca
b) Usar un gancho 'garrocha' para colocar la trampa.
c) La trampa debe de estar en un lugar sombreado y ventilado en el árbol a ¾ partes de la altura del mismo.

La densidad de trampas recomendada es de 1 trampa por 1 há de cultivo de mango, en la cual en aquellas parcelas que se supere dicha superficie, será implementado este sistema.

3. DE SUPERVISIÓN

La Supervisión de las actividades desarrolladas en el campo será verificado de manera mensual por técnicos del Departamento de Vigilancia Fitosanitaria de la Oficina Central del SENAVE, quienes estarán responsables de la Base de datos generado de este Plan.

4. DE IDENTIFICACION

Las muestras de los especímenes capturados serán remitidas en forma semanal bajo condiciones de almacenamiento adecuado al Laboratorio Biológico de SENAVE - sede San Lorenzo, para identificar las especies de Moscas de la Fruta colectadas en las trampas instaladas.

Igualmente, en el Laboratorio serán criados larvas de Moscas de la Fruta en jaulas de maduración, a fin de identificar sus especies.

5. DE EVALUACION

La aplicación del Plan y el procesamiento de la información serán realizados permanentemente por los técnicos responsables, designados oficialmente por el SENAVE, lo que permitirá ir realizando los ajustes necesarios para logra los resultados esperados.

REQUERIMIENTOS

1. OPERATIVOS

- Técnicos de campo, de oficina y de laboratorio
- 1 Vehiculo exclusivo para el Programa
- Combustible
- Viáticos

2. EQUIPOS Y ACCESORIOS INDISPENSABLES

Cuadro 2. Equipos y accesorios

REFERENCIA	ESPECIFICACIÓN	CANTIDAD
Trampas Mc Phail	-	120
Trampas Jackson	-	120
Proteina hidrolizada	-	Cantidad necesaria
Trimedlure	-	
Conservadoras	De Isopor de 50 litros	2
Bidones	De 10 litros	4
GPS	-	1
Balde	De 10 litros	4
Embudo	De 20 cm de diámetro	2
Colador	De 20 cm de diámetro	2
Guante	De goma	4

Pinza entomológica	-	2
Bisturi	-	2
Lupa	-	1
Gancho	-	2
Frasco entomológico	-	Según necesidad
Alcohol	De 70 percent	5 litros
Etiquetas adhesivas/rótulos	-	Según necesidad
Marcador indeleble	Punta gruesa	8

CRONOGRAMA PARA LA EJECUCION DE ACTIVIDADES

Cuadro 3. Cronograma de actividades

ACTIVIDAD	2009		2010			
	Nov.	Dic.	En.	Feb.	Mar.	Abr.
Capacitación sobre Manejo Fitosanitario del cultivo de mango***						
Capacitación sobre Control de Moscas de la Fruta***						
Instalación de trampas p/moscas de la fruta en las fincas de los productores censados*						
Georeferenciamiento de las trampas*						
Recebado de las trampas tipo Mc Phail y Jackson*						
Muestreo de frutos y Registro de datos en planilla*						
Identificación de especies de Moscas**						
Cría de larvas en jaulas de maduración**						
Supervisión y verificación de actividades***						
Evaluación						

RESPONSABLES

* B.T.A Néstor Martínez y otro técnico

** Técnicos del Laboratorio Biológico del SENAVE

*** Departamento de Vigilancia Fitosanitaria, SENAVE

RESPONSABLES DE LOS RECURSOS

Cuadro 4. Responsables

REQUERIMIENTO	APORTE APHIS/IICA	APORTE SENAVE
Equipo técnico permanente		
Vehículo		

Combustible		
Viáticos*		
Equipos y accesorios**		

* Los viáticos estarán sujetos a la escala establecida por la Resolución vigente del SENAVE.

** Se detalla en el Cuadro 2

RESULTADOS ESPERADOS

- Productores de mango del Departamento de la Cordillera capacitados, realizan un mejor manejo fitosanitario del cultivo de mango.
- Red de trampeo instalado e implementado en el Departamento de la Cordillera.
- Producción de mango mejorada con la aplicación de estrategias de control fitosanitario, disminuye la población de moscas de la fruta en el Departamento de la Cordillera
- Productores de mango con posibilidad de aumentar la demanda del producto.

PLAZO DEL PLAN DE TRABAJO

El Plan de Trabajo entrará en vigencia a partir de la firma de la Carta de Entendimiento entre el SENAVE y el IICA y durará hasta el 30 de abril de 2010.

Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:

1. [ej., Artículo de noticias: *Utopia successfully averts major pest outbreak of Pestifera majora*. Food supply safe. The Utopia Chronicle, 12 de diciembre de 2018]
2. [ej., artículo de revista científica]
3. [ej., informe de la ONPF]
4. [ej., enlaces web]
5. [ej., fotografías u otros formatos multimedia]

…Etc.

PERU

Nombre:	Johny Naccha Oyola
Organización:	SENASA-PERU
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Correo electrónico:	jnaccha@senasa.gob.pe
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Título de la actividad:	Identificación e inventario de insectos, hongos y chromistas de importancia forestal
Resumen (250 palabras):	En el 2006, junto a entidades privadas y públicas, el SENASA lleva a cabo el fortalecimiento de la vigilancia forestal con la 'Identificación e inventario de insectos, hongos y chromistas de importancia forestal en las regiones de Huánuco, Junín, Lima, Loreto, Madre de Dios, San Martín y Ucayali', a fin de dar impulso a la vigilancia forestal y con ello conocer las plagas forestales presentes en el Perú. La información colectada permitiría al SENASA establecer medidas fitosanitarias más adecuadas para la importación de material vegetal forestal y exportación de madera; evitando el ingreso de nuevas plagas forestales y ofreciendo al productor y exportador el sustento técnico sobre la presencia o no de una determinada plaga en el Perú. De igual manera, la identificación taxonómica de las plagas, sus hospederos, órganos afectados y distribución, facilitaría la implementación de planes de manejo integrado de plagas forestales (MIP); así como establecer planes de contingencia ante la entrada de nuevas plagas, que son amenaza constante para los bosques, plantaciones forestales, viveros y explotaciones de madera. El SENASA colectó e identificó numerosas plagas forestales en las regiones involucradas en el proyecto, específicamente en viveros, plantaciones forestales, bosques naturales y centros de acopio y de transformación de madera, dando resultados más que satisfactorios, incluso reportando por primera vez especies para el Perú.
Indique el tipo de vigilancia realizada, ya sea general o específica (por ejemplo encuesta de plagas, de productos básicos u hospederos, al azar o dirigida):	Vigilancia especifica
Resuma el motivo por el que se adoptó la medida de vigilancia:	Los escasos estudios e información, sobre las plagas forestales presentes en los bosques, plantaciones, viveros y madera de los centros de transformación y acopio en el Perú, representaban una traba para la adopción de medidas fitosanitarias adecuadas en temas de importación, exportación, manejo de plagas forestales (MIP) y planes de contingencia ante la entrada de plagas no presentes en el país.
Resuma el beneficio, resultado o producto inmediato de la medida de vigilancia:	La información colectada ha permitido al SENASA establecer medidas fitosanitarias más adecuadas para la importación de material vegetal forestal y exportación de madera.
Proporcione una descripción de práctica idónea en su país en caso de vigilancia de plagas:	
A fin de superar la escasez de información sobre plagas forestales, el SENASA llevó a cabo la identificación de plagas en las principales regiones forestales del país. El proyecto de una duración de dos años se inició en octubre de 2006 desarrollándose actividades hasta diciembre	

de 2008.

Ámbito de influencia

El proyecto comprendió los departamentos de Huánuco, Junín, Lima, Loreto, Madre de Dios, San Martín y Ucayali.

Objetivo general

- Generar información científica sobre entomología y patología forestal

Objetivos específicos

- Disponer de información sobre las plagas forestales presentes y no presentes en el país y material didáctico para capacitación.
- Implementar una colección de insectos y patógenos forestales.
- Conocer la distribución geográfica de las plagas forestales presentes en el país
- (georeferenciación).

Instituciones cooperantes

- Universidad Nacional Agraria La Molina – Facultad de Ciencias Forestales.
- Universidad Nacional de Ucayali – Facultad de Ciencias Forestales
- Universidad Nacional del Centro del Perú - Facultad de Ciencias Forestales y
- del Ambiente
- Universidad Nacional de la Amazonía Peruana – Facultad de Ciencias Forestales
- Universidad Nacional Agraria de la Selva – Facultad de Facultad de Recursos
- Naturales Renovables
- Universidad Nacional San Antonio Abad del Cuzco – Filial Madre de Dios –
- Facultad de Ciencias Forestales y Medio Ambiente.
- PRONAMACHCS
- ICRAF

Ejecución:

El proyecto tuvo un aporte monetario de aproximadamente US$125 000 y otro aporte similar no monetario del SENASA y colaboradores cercano a los US$132 000.

El presupuesto básicamente fue destinado a actividades de prospección en campo (combustible, viáticos de especialistas, materiales y equipos para las colectas, etc.), insumos, materiales y equipos de laboratorio (alcohol, algodón, reactivos, agujas y cajas entomológicas, estereoscopios, microscopios, etc.) y materiales y equipos de campo (cámaras fotográficas, GPS's, lupas, navajas, sierras, etc.) así como la edición de una publicación.

Actividades:

Se colectaron muestras en viveros y plantaciones forestales, así como centros de transformación y bosques, se elaboraron dos manuales de toma y envío de muestras forestales, el primero denominado 'Toma y envío de muestras de artrópodos forestales' y el segundo 'Toma y envío de muestras vegetales afectadas por patógenos forestales', los cuales describen los procedimientos y técnicas de cómo colectar los insectos, reconocimiento de los daños por enfermedades y su remisión a los laboratorios de micología y entomología de la Unidad de Centros de Diagnóstico de Sanidad Vegetal del SENASA, con sede en la Molina, Lima.

Resultados:

- Información sistematizada (software) con la lista de especies de insectos y patógenos de importancia forestal, presentes en las principales áreas de producción y comercialización de productos forestales del ámbito del proyecto.
- Lista de especies de insectos y patógenos de importancia forestal no presentes
- (exóticas) para el Perú.
- Distribución geográfica de plagas forestales (geo-referenciación).
- Centro de Diagnóstico de Sanidad Vegetal del SENASA con una importante mejora en su capacidad de diagnóstico en entomología y patología forestal.
- Colección de insectos y micoteca del SENASA con especímenes de importancia
- forestal debidamente identificados.

Conclusiones:

- El estudio realizado fue el primer trabajo en el cual se han usado los procedimientos y técnicas en campo y laboratorio acorde a una investigación científica en plagas forestales en varias regiones del país.
- El estudio realizado da al SENASA el conocimiento del estatus fitosanitario de las especies forestales en el país, lo que permite establecer mejores medidas fitosanitarias en el área forestal.
- el SENASA puede establecer, áreas especializadas en sanidad forestal, lo que permitiría dar el soporte técnico necesario a los productores, exportadores, importadores e investigadores en esta materia.

Si desea proporcionar enlaces o anexos para apoyar el ejemplo de práctica idónea ofrecido, indique los títulos a continuación:

Informe:

http://www.senasa.gob.pe/0/modulos/JER/JER_Interna.aspx?ARE=0&PFL=2&JER=303&JERR=308

Fotografías:

http://www.senasa.gob.pe/0/modulos/JER/JER_Interna.aspx?ARE=0&PFL=2&JER=1986

SOUTHWEST PACIFIC

FIJ

Name:	Mr Ilaisa Dakaica
Organization:	Biosecurity Authority of Fiji
Address:	PO Box 18360, Suva, Fiji
Email:	idakaica@biosecurityfiji.com
Tel:	(679)331 2512

Title of activity:	The surveillance of exotic fruit flies
Abstract (250 words):	Fiji has seven species of fruit flies where three (3) *Bactrocera passiflorae*, *B. xanthodes* and *B. kirki* are of economic importance. *B. kirki* only exists on Rotuma, the furthest northern island of Fiji and is absent in any other part of Fiji. Aircrafts and vessels arriving from Rotuma are regularly monitored for host fruit. Rotuma is now also declared a Biosecurity Controlled Area where the movement of host fruit is strictly prohibited. CUE, ME and MAT lures used in Steiner traps are set up all over Fiji including the Yasawa and Mamanuca islands to monitor populations of existing fruit flies and detect new incursions. Traps are cleared every 2 weeks and serviced once a month. Specimens are authenticated at the Fruit Fly Section, Research Division at Koronivia Research Station. In addition to trap catches, host fruits are also collected for fruit fly emergence tests. The fruit flies are also identified and authenticated.
Indicate the type of surveillance conducted whether General or Specific (i.e. Pest, Commodity / Host, Random, or Targeted survey):	General: Host surveillance Specific: Exotic fruit flies to Fiji
Summarize the reason for taking the surveillance action:	Exotic fruit flies pose a risk to Fiji's export of fruit fly host commodities such as eggplant, pawpaw, mango and breadfruit. The current heat treatment used in Fiji (HTFA-High Temperature Forced Air) is calibrated to treat for *B. passiflorae* and *B. xanthodes*. A new fruit fly would mean a suspension of exports.
Summarize the immediate benefit, result or outcome of the surveillance action:	Monitor the population trend of Fiji's fruit fly populations, early detection and response to exotic fruit flies and maintain market access of host fruits and vegetables.
Provide a narrative of your country's best practice in pest surveillance case:	
[Start Narrative here – maximum of 3 pages] **The surveillance method for exotic fruit flies to Fiji** 1. Preparation • Make local surveillance workplan. • Check Steiner traps for damage	

- Prepare bait and dip cotton wicks
- Install baited cotton wicks to Steiner traps
- Install wire gauze

2. Areas

   Traps are placed directly on a known host tree on farms, residential areas, close proximity to ports and airports and in forests.

3. Duration
   - Fruit fly specimens are collected every 2 weeks, identified and recorded. Servicing of traps is done once a month.
4. Material
   - Steiner traps, lures, adhesive glue, latex gloves, permanent markers.
5. Method

   Set up
   - Identify location for trap sites
   - Identify host trees at site such as mango, citrus, guava, pawpaw and eggplant.
   - Hang trap with lure to tree at an appropriate height.
   - Apply adhesive glue to wire tied to tree to prevent ants from entering the traps.

   Clearing
   - Traps are cleared every 2 weeks
   - Requires 3-4 people to clear; 1 clears ME, 1 clears CUE, 1 clears Trimedlure
   - Fruit fly specimens are transferred to small boxes and labelled.
   - Fruit fly specimens taken to Koronivia Research Station Fruit Fly Laboratory for identification
   - Number and species are recorded.
   - Changing of lures and/or traps is done once a month.

If you wish to provide links or attachments in support of the best practice case provided please list their titles below:

1. Pest Advisory Leaflet No.28, 2000. Secretariat of the Pacific Community
2. Emergency Response Plan for Fruit Flies in the Fiji Islands
3. www.spc.int/pacifly/
4. http://www.spc.int/pacifly/Success_stories/Quarantine_surveillance_2.htm

Annex II. Technical Resources by Region

AFRICA

Mauritania

البلد:	الجمهورية الإسلامية الموريتانية
اسم المجيب:	المهندس :الشيخ أحمد المختار
العنوان:	إدارة الزراعة –نواكشوط موريتانيا
العنوان الإلكتروني:	biosidina@yahoo.fr

يرجى وضع قائمة بالموارد الفنية المتوافرة للعاملين المعنيين بمراقبة الآفات:

النوع	العنوان	تاريخ النشر	وصف الموارد الفنية	الكاتب/المحرر
الأدوات (مثل البرمجيات، مساعدات التشخيص، إلخ)	1-حاضنات 2-مجاهر الكترونية ومكبرات 3-مبردات وثلاجات ...	2009-1 2009-2 2009-3 ...		FAO
مواد التدريب	1-أجهزة الكترونية 2-حواسيب -3 ...	-1 -2 -3 ...	-1 -2 -3 ...	-1 2--مصلحة حماية النباتات -3 ...
العروض	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...
الفيديو	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...
التعلم الإلكتروني	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...
الكتيبات	1-كتيبات توضح الوصف التقني لعينات البذور -2	2002-1 -2	-1 -2	1-المعهد الوطني للبحث الزراعي -2

النوع	العنوان	تاريخ النشر	وصف الموارد الفنية	الكاتب/المحرر
	-3 ...	-3 ...	-3 ...	-3 ...
الخطوط التوجيهية	1-خطط العمل في مكاتب التفتيش الصحي للنبات -2 -3 ...	1999-1 -2 -3 ...	-1 -2 -3 ...	1-مصلحة حماية النباتات -2 -3 ...
إجراءات التشغيل المعيارية	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...
مواد المناصرة (مثل الملصقات والكتيبات إلخ)	1-ملصقات للأنواع الممرضة من الحشرات 2-ملصقات توضح الخطوط العريضة لعمل الرقابة في المينا -3 ...	2008-1 -2 -3 ...	-1 -2 -3 ...	-1 2--مصلحة حماية النباتات -3 ...
غيرها	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...

الرجاء تحديد مدى استعدادكم لتوفير الموارد المذكورة أعلاه إلى آخرين من مجتمع الصحة النباتية من خلال البوابة الدولية للصحة النباتية؟*

نعم. يمكن الاتصال بنا لتقاسم جزء من الموارد المذكورة أو كلها.

كلا. لا نوافق

MAURITANIA

Country:	Islamic Republic of Mauritania
Name of respondent:	Ing. Cheikh Ahmed El Mokhtar
Address:	Direction of Agriculture
Email:	biosidina@yahoo.fr

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	FAO		1 – 2009 2 – 2009 3 - 2009	1- Incubators 2- Microspcope and binocular 3 – Congelators and refrigerators
Training materials	1 – 2 – Plant protection service 3 -			1 – Electronic material 2 – Computers 3 -
Presentations				
Videos				
E-learning				
Manuals	1 – National Centre of Agricultural research		1 - 2002	1 – Brochures on technical description of seeds samples
Guidelines	1 – Plant protection service		1 - 1999	1 – Action Plans of sanitary pests control
Standard operating Procedures (SOPs)				
Advocacy Material (posters, pamphlets etc.)	1 – 2 – Plant protection service		1 – 2008 2 – 3 -	1 Posters of insects diseases 2 Poster on the general action plan of control in the port
Other				

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP)? *

☐ Yes. We can be contacted to share any or all of the resources listed.

☐ No. I do not agree.

ASIA REGION

BANGLADESH

Country:	Bangladesh
Name of respondent:	Md. Torikul Islam
Address:	Plant Protection Wing, DAE, Khamarbari, Dhaka, Bangladesh.
Email:	mtitutul@yahoo.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Training materials	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Presentations	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Videos	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
E-learning	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Manuals	1. Pest Surveillance, forecasting and Early Warning Manuals (In Bangla). 2. 3. …	1. 2008 2. 3. …	1. 2. 3. …	1. Md. Monirul Islam Entomologist 2. 3. …
Guidelines	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Standard operating Procedures (SOPs)	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Advocacy Material (posters, pamphlets etc.)	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Other	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indicate your willingness to make available the resources listed above to others in the phytosanitary community
via the International Phytosanitary Portal (IPP)? *

☑ Yes. We can be contacted to share any or all of the resources listed.

☐ No. I do not agree.

INDIA

Country:	India
Name of respondent:	NPPO- Directorate of Plant Protection Quarantine and Storage
Address:	Directorate of Plant Protection Quarantine and Storage, NH-IV, Faridabad-121001 (Haryana), India.
Email:	Ramasre56@gmail.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Data logger hand-held Device for e-pest surveillance 2. Global positioning system (GPS) 3. Software for e-pest surveillance 4. Complete computer system 5. Software for dacnet/pdmis system 6. Software for dacnet/iipm system 7. Mobile handsets for transferring data through SMS 8. Electron microscope for pest diagnosis-2 Nos. One each at NPQS, New Delhi and another at RPQS, Channai 9. CABI crop pest compendium 10. e-locust device with Ramses system	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Training materials	1. IPM kit 2. Specimens of pests and their natural enemies 3. Photographs of pest and their natural enemies 4. Herbarium 5. Survey kit/ tools	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Presentation	1. IPM exhibitions 2. Farmers' fairs 3. Farmers' group discussions			
Videos	1. Video on bio-control of crop pests and weeds 2. Video on IPM on rice and cotton crops 3. Video on safe and judicious use of pesticide	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
E-learning	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Manuals	1. IMP package for 77 crops have been developed and are available on web site www. ppqs.gov.in	1. 2001	1. Packages have been developed by Directorate of PPQ&S in consultation with state dept. of Agriculture and Horticulture, state agricultural universities, Indian Council of	1. 2. 3. …

			Agricultural Research (ICAR) Institutes.	
Guidelines	1. Guidelines on FFS methodology 2. Guideline for grant in aid for FFS programmes 3. Guidelines for establishment of state bio-control 4. Laboratories 5. Guidelines for locust surveillance		4. FAO guidelines are being used.	
Standard operating Procedures (SOPs)	1. SOP on e-pest surveillance	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Advocacy Material (posters, pamphlets etc.)	1. Posters on seed treatment 2. Posters on crop pests and their natural enemies 3. Posters on crops for IPM advisories	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP)?*

YES	We can be contacted to share any or all of the resources listed and placed on web site www. ppqs.gov.in and www.plantquarantineidia.org
	No. I do not agree.

MYANMAR

Country:	Myanmar
Name of respondent:	Dr Khin Thein Nyunt
Address:	Department of Agricultural Research, Nay Pyi Taw
Email:	ktnyunt@gmail.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Crop Protection Compendium 2. SAFRINET 3. Lucid Keys 3.3 …	1. 2007 2. 2005 3. 2010 …	1. CABI 2. South Africa Scientific Institute 3. Centre for Biological Information Technology (CBIT) …	1.CABI Team 2. Individual Sciencetist 3. CBIT Team …
Training materials	1. LCD Projectors 2. Laptop Computer 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Presentations	1. Available 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Videos	1. None 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
E-learning	1. None 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Manuals	1. As above 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Guidelines	1. None 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Standard operating Procedures (SOPs)	1. None 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Advocacy Material (posters, pamphlets etc.)	1. Rice pest & disease pamphlets and posters 2. Natural enemies poster 3. Rodent, Brown Planthopper pamphlets and posters	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Other	1. Booklets of rice, vegetable, pea and bean, sesame, tomato and groundnut pest and disease …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP)?

YES We can be contacted to share any or all of the resources listed.

☐ No. I do not agree.

NEPAL

Country:	Nepal
Name of respondent:	Dr Yubak Dhoj GC
Address:	Plant Protection Directorate, Harihar Bhawan, Lalipur, Nepal
Email:	yubakgc@yahoo.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Monitoring of white grubs using light traps 2. 3.	1. 2010/2011 2. 3.	1. In the website 2. 3.	1. Dr Yubak Dhoj GC 2. 3.
Training materials	1. Integrated Pest Management of vegetables and fruit crops 2. 3.	1. 2010/2011 2. 3.	1. As a book 2. 3.	1. Dr Yubak Dhoj GC And R. K. Subedi 2. 3.
Presentations	1. White grubs control-the novel means 2. 3.	1. 2011 2. 3.	1. in farmers workshop 2. 3.	1. Dr Yubak Dhoj GC 2. 3.
Videos	1. White grubs control in Nepal 2. 3.	1. 2011 2. 3.	1. CDs 2. 3.	1. Dr Yubak Dhoj GC 2. 3.
E-learning	1.White grubs and other insect control 2. 3.	1. 2010 and 2011 2. 3.	1. On the official web: www.ppdnepal.gov.np 2. 3.	1. PPD 2. 3.
Manuals	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Guidelines	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Standard operating Procedures (SOPs)	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Advocacy Material (posters, pamphlets etc.)	1. White grubs control using insect pathogenic fungus 2. 3. …	1. 2011 2. 3. …	1. Booklets, leaflets 2. 3. …	1. Dr Yubak Dhoj GC 2. 3. …
Other	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP)? *

Yes	Yes. We can be contacted to share any or all of the resources listed.
	No. I do not agree.

SRI LANKA

Country:	Sri Lanka
Name of respondent:	S.G.R. de Silva
Address:	PO.Box 74, SCPPC, Gannoruwa, Peradeniya, Sri Lanka
Email:	scppc@sltnet.lk / spreapgtraining@yahoo.com

Please list the technical resources that are available to the staff involved in pest surveillance:

***** Please see the footnote below.***

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. 2. 3	1. 2. 3.	1. 2. 3.	1. 2. 3.
Training materials	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Presentations	1. 2. 3. …	1. 2. 3. …	In order to highlight some of the work carried out by local scientists with regard to identification, surveys and surveillance a set of selected research papers is attached please – Annexure B	1. 2. 3. …
Videos	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
E-learning	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Manuals	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Guidelines	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Standard operating Procedures (SOPs)	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Advocacy Material (posters, pamphlets etc.)	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Other	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP).

☑ Yes. We can be contacted to share any or all of the resources listed.

☐ No. I do not agree.

***** N.B.***

There is no formal pest surveillance programme, as described in ISPM-6, conducted by the NPPO of Sri Lanka. Therefore it is difficult to fill the above table because components such as **regular surveys and monitoring systems** are not in place. However, when pest detections are reported regulatory activities are initiated with the help of other specialized institutions in the Department of Agriculture. In addition, for identification and management purposes collaborative assistance is mobilized with scientists from Universities and other government Research Institutions as the case may be.

Eg: Kerala wilt disease in coconut, which has recently devastated coconut plantations in southern Sri Lanka, the identification and control measures were undertake by the Coconut Research Institute (CRI). Regulatory measures are implemented by the National Plant Protection Organization (NPPO) in collaboration with CRI.

CARIBBEAN REGION

GRENADA

Country:	Grenada
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Email:	paulgraham@spiceisle.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Major *Anastrepha* of the Caribbean 2. 3.	1. 2011 2. 3	1. Laminated sheet with photos 2. 3.	1. Graham, P. 2. 3.
Training materials	1. Workshop on the Identification of Fruitflies of Economic Importance 2. Lepidoptera Identification Workshop Manual (*Tuta absoluta* survey) 3. Regional Workshop on the Identification of heteropteran pests (*Oxycarenus hyalipennis* survey) …	1. 2011 2. 2011 3. 2010	1. Workshop proceeds 2. Workshop proceeds 3. Workshop proceeds	1. Graham, P.& Muller, A 2. Lewis, D. & Parris, T. 3. Halbert, S. and Leavengood, J.
Presentations	1. ABCs of Economic Fruitflies 2. Fruitflies of Economic Importance 3.	1. 2011 2. 2004 3.	1. PowerPoint presentation 2. PowerPoint presentation 3.	1. Steck, G. and Dean, D. 2. Norrbom, A. 3. …
Videos	1. Citrus Greening Disease 2. 3.	1. February 2006 2. 3.	1. DVD 2. 3.	1. UFL 2. 3.
E-learning	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Manuals	1. Trapping Guidelines for Area Wide Fruitfly Programmes 2. Fruitfly Trapping Manual 3. Florida Fruitfly Detection Manual	1. 2003 2. 1985 3. 2011	1. Written manual 2. Handwritten manual 3. Typed manual	1. IAEA 2. Dreves, A. 3. FDACS,USDA/APHIS
Guidelines	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Standard operating Procedures (SOPs)	1. 2. 3.	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Advocacy Material (posters, pamphlets etc.)	1. Moko Disease 2. Black Sigatoka 3. West Indin Fruitfly 4. Giant African Snail 5. Fruitfly Pests of the World	1. 2009 2. 2004 3. 2007 4. 2007 5. 2002	1. Poster 2. Poster 3. Poster 4. Poster 5. Poster	1. Ministry of Agriculture 2. Ministry of Agriculture 3. FAO 4. IICA 5. FAO / IAEA
Other	1. 2.	1. 2.	1. 2.	1. 2.

	3.	3.	3.	3.

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP)?*

☑ Yes. We can be contacted to share any or all of the resources listed.

☐ No. I do not agree.

EASTERN AND CENTRAL ASIA

ARMENIA

Страна:	Армения
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Пожалуйста, перечислите технические ресурсы, которые доступны персоналу, вовлеченному в фитосанитарный надзор:

Тип	Название	Дата публикации	Описание технического ресурса	Автор/Редактор
Инструменты (напр., программное обеспечние, помощники при диагностике и т.д.)	1.Программные обеспечения: проекты Евросоюза, Всемирного банка, ООН/ЕС 2. 3.	1. 2005,.г., 2. 2006-2007г 3. 2011-2012г.г …	1.Проекты законодательных актов, 2. семинары 3. ,рекомендации экспертов …	1.Эксперты проектов 2. 3. …
Обучающие материалы	1.Доклады лекторов 2. Статьи журнала ‘Защита и карантин растений’ 3.Публикации ученых о научно-исследовательских достижениях в СМИ Армении	1. 2011г. 2.2005г. по н/в 3.систематически	1. Практические занятия в лаборатории, посещения пограничных контрольных пунктов, территориальных подразделений ,лекционный материал 2.Журналы 3.Журналы и газеты	1. Ереванский агроуниверситет 2. Ученые,авторы статей 3. Специалисты.авторы статей
Презентации	1. Прзентации, полученные во время международных семинаров,организованных МККЗР / ЕОКЗР 2. Презентации семинаров по усовершенствованию фитосанитарного законодательстав и согласование с требованиями МСФМ при содействии Мирового банка 3.. Презентации семинаров из проекта Евросоюза ‘’Программа по продовольственному обеспечению ‘’ 4. Презентации семинаров программы ООН по	1. постоянно 2.2005г. 3.03.09.2006г. -08.06.2007г. 4.2011-2012г.г 5.2008г.	1. Материалы на бумаге,в электронном виде и видео 2. Материалы на бумаге,в электронном виде и видео 3. Материалы на бумаге,в электронном виде и видео **4.** Материалы на бумаге,в электронном виде и видео **5.** Материалы на бумаге,в электронном виде и видео …	1.МККЗР/ ЕОКЗР 2.ЕОКЗЗР др.А.Орлинский 3.эксперт Евросоюза Л.Нечаева 4.Эксперт Евросоюза Л.Нечаева 5.Министерство сельского хозяйства Литвы

	развитию 5. Презентации, полученные во время визита обучения в странах Евросоюза (Литва)			
Видео	1. нет 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Образование с помощью интернета	1. Информация об обучении и представленный материал во время обучения 2. Поиск и использование материалов по фитосанитарному контролю и описанию вредных организмов в интернете	1.систематичек 2.систематичеки	1.Компьютер 2. Компьютер	1. 2. 3. …
Инструкции	1.Сборник инструкций по проведению фитосанитарного надзора (проект)	1. 2012-2013г .г	1.Программа Евросоюза	1.Эксперт Евросоюза 2.НКОЗР 3. …
Руководства	1. План развития 2. Законодательные акты 3. Утвержденный порядок действий по проведению регистрации, проверки экспорта,импорта, взятия образцов и т.д	1.2005-2010г .г 2.1991-2012г .г 3.2009-2012г .г	1.НОКЗР Армении 2.Мин селского хозяйства РА 3. НОКЗР Армении	1.Специалисты 2. Министерство 3. НОКЗР Армении
Стандартный порядок действий	1.Инспектор пользуется: а) план развития б) законодательные акты в) утвержденный порядок действий по проведению регистрации, проверки экспорта,импорта, взятия образцов и т.д	1.2005-2010г .г	1. НОКЗР Армении	1.Специалисты 2. 3. …
Информационный материал (плакаты, памфлеты и т.д.)	1.Плакаты об ограниченно распространенных вредных организмах 2. Методики и брошюры. 3. Международные стандарты МСФМ и ФМ ЕОКЗР (переведенные на армянский язык)	1.- 2.- 3.-	1. 2. 3.	1. 2. 3.
Другое	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.

		…	…	…

Отметьте, хотите ли Вы сделать доступными перечисленные выше ресурсы для других членов фитосанитарного сообщества через Международный фитосанитарный портал (МФП)?*

☐ Да. С нами можно связаться для получения любого или всех перечисленных ресурсов.

☐ Нет. Я не согласен.

BELARUS

Страна:	Республика Беларусь
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Пожалуйста, перечислите технические ресурсы, которые доступны персоналу, вовлеченному в фитосанитарный надзор:

Тип	**Название**	**Дата публикации**	**Описание технического ресурса**	**Автор/Редактор**
Инструменты (напр., программное обеспечние, помощники при диагностике и т.д.)	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Обучающие материалы	1. Перечень нормативных документов, используемых для проведения карантинной экспертизы 2. 3. …	1. 01.03.2005. 2. 3. …	1. Включает более 100 источников литературы, инструкций и методических указаний по карантинным организмам, включенным в Перечень карантинных организмов для Республики Беларусь. 2. 3. …	1. Утвержденный Министерством сельского хозяйства и продовольствия Республики Беларусь 2. 3. …
Презентации	1.Diabrotica virgifera 2.Liriomyza sp. 3.Phthorimaea operculella 4. Thrips palmi 5. Callosobruchus spp. 6. Anoplophora glabripennis 7. Bemisia tabaci 8. Caulophilus latinasus 9. Cuscuta spp. 10. Ambrosia (3 вида) 11. Striga sp. 12. Ipomoea (2 вида) 13. Cenchrus pauciflorus 14. Bidens pilosa 15. Bursaphelenchus xylophilus 16. Globodera pallida 17. Globodera rostochinensis 18. Tuta absoluta 19. По досмотру лесопиломатериалов 20.	1-17. 2005	1. Презентации по идентификации карантинных организмов. 2. 3. …	1. специалисты по диагностике карантинных объектов 2. 3. …
Видео	1.www.youtube.com	1.	1.	1.

	2. 3. …	2. 3. …	2. 3. …	2. 3. …
Образование с помощью интернета	1. www.eppo.org 2. www.ippc.int 3. www.issg.org 4. www.sevin.ru 5. www.padil.gov.au/ 6. www.issg.org/database/species 7. www.ggiskzr.by …	1. 2. 3. …	1-6 Информация по карантинным организмам 7. Сайт ГУ «Главная госинспекция по карантину и защите растений»	
Инструкции	1. Инструкция о порядке проведения фитосанитарных наблюдений 2.Инструкция о порядке обеззараживания и очистке подкарантинных объектов 3. Инструкция о порядке проведения карантинной экспертизы 4. Инструкция о порядке выдачи фитосанитарных сертификатов 5. Инструкция о порядке уничтожения подкарантинной продукции 6. Инструкция о порядке участия представителей ГУ «Главная государственная инстпекция по семеноводству, карантину и защите растений» в проведении досмотра подкарантинной продукции 7. Инструкция о порядке изъятия, возврата в страну-экспортер подкарантинной продукции 8. Инструкция о порядке присвоения индивидуального регистрационного номера юридическим лицам и индивидуальным предпринимателям, осуществляющим обработку и маркировку древесного упаковочного материала, пименяемого при экспорте товаров	1. 22.08.2006 2-4. 27.09.2006 5. 13.09.2006 6-7. 15.01.2007 8. 05.12.2006	1. Определяет цели, задачи и порядок проведения фитосанитарных наблюдений 2. Устанавливает порядок обеззараживания и очистки 3. Устанавливает порядок проведения карантинной экспертизы в целях окончательной идентификации карантинных объектов 4. Устанавливает порядок и условия выдачи ФСС 5. Устанавливает порядок уничтожения подкарантинной продукции 6. Устанавливает порядок участия в проведении досмотра 7. Устанавливает порядок изъятия, возврата в страну-экспортер 8. …	1. Постановление №50 Министерства сельского хозяйства и продовольствия РБ 2-4. Постановление №57 Министерства сельского хозяйства и продовольствия РБ 5. Постановление №59 Министерства сельского хозяйства и продовольствия РБ 6-7. Постановление №4 Министерства сельского хозяйства и продовольствия РБ 8. Постановление №84 Министерства сельского хозяйства и продовольствия РБ
Руководства	1.Руководство по досмотру и экспертизе	1.1972 2.	1. Подробное руководство по	1. Изд. «Колос» под ред.А.А.Варшалович

	растительных и других подкарантинных материалов 2. 3. …	3. …	досмотру и экспертизе 2. 3. …	а 2. 3. …
Стандартный порядок действий	1. Закон Республики Беларусь о защите растений 2. Положение о порядке определения и обозначения границ карантинной фитосанитарной зоны, наложения и снятия карантина растений, установления и обеспечения карантинного режима 3. Положение о порядке осуществления государственного фитосанитарного контроля в пунктах пропуска через государственную границу Республики Беларусь и (или) в местах назначения . …	1. 25.12.2005 2-3. 14.06.2006 …	1.Определяет правовые, организационные и экономические основы защиты растений от вредителей, болезней и сорняков, карантина растений, обращения со средствами защиты растений и направлен на предотвращение потерь растительной продукции. …	1. Закон №77-З Принят Палатой представителей Одобрен Советом Республики 2-3. Постановление Советов Министров Республики Беларусь № 881 …
Информационный материал (плакаты, памфлеты и т.д.)	1. Плакаты по карантинным организмам 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Другое	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Отметьте, хотите ли Вы сделать доступными перечисленные выше ресурсы для других членов фитосанитарного сообщества через Международный фитосанитарный портал (МФП)?*

☐ Да. С нами можно связаться для получения любого или всех перечисленных ресурсов.

☐ Нет. Я не согласен.

MOLDOVA

Страна:	Республика Молдова
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Пожалуйста, перечислите технические ресурсы, которые доступны персоналу, вовлеченному в фитосанитарный надзор:

Тип	Название	Дата публикации	Описание технического ресурса	Автор/Редактор
Инструменты (напр., программное обеспечение, помощники при диагностике и т.д.)	1.информационная программа PQR 4.6 2. 3. …	1. 2. 3. …	1. www.eppo.org 2. 3. …	1. EPPO 2. 3. …
Обучающие материалы	1. Международный стандарт по фитосанитарным мерам №6 «Руководство по надзору»	1. 2005 г.	1. http://archives.eppo.org/WORLDWIDE/ispm.htm	1. EPPO
	2. Директива Европейского Союза 2000/29/ЕС от 8 мая 2000	2. 2000 г.	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=DD:03:33:32000L0029:RO:PDF	2. Комиссия Европейского Союза
	3. …	3. …	3. …	3. …
Презентации	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Видео	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Образование с	1. официальны	1.	1. http://www.fao.org/	1. ФАО

помощью интернета	й сайт ФАО			
	2. официальный сайт ЕРРО	2.	2. http://www.eppo.org/	2.ЕРРО
	3. официальный сайт Международной Конвенции по защите и карантину растений	3.	3. https://www.ippc.int/	3. IPPC
	4. официальный сайт Главной инспекции по фитосанитарному надзору и семенному контролю …	4. 2009 г. …	4. http://www.fito.gov.md/ …	4. Главная инспекция по фитосанитарному надзору и семенному контролю …
Инструкции	инструкции утвержденные постановлением Правительства Республики Молдова: 1. об утверждении Правил обследования, которые необходимо проводить в целях признания защищаемых зон в Республике Молдова и Правил передвижения некоторых растений, продуктов или других объектов через защищаемую	2011	http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=339471 http://lex.justice.md/viewdoc.php?action=view&view=doc&id=339472&lang=2 http://lex.justice.md/viewdoc.php?action=view&view=doc&id=339795&lang=2	Министерство сельского хозяйства и пищевой продукции Республики Молдова

	зону; 2. о срочных фитосанитарных мерах по предупреждению ввоза и распространению в Республике Молдова некоторых карантинных организмов; Об утверждении Специальных требований при ввозе и перемещении растений, растительных продуктов и других объектов по территории Республики Молдова			
Руководства	Периодически, в зависимости от создания той или иной фитосанитарной ситуации, издаются рекомендации и руководства виде писем, приказов	1. 2. 3. …	1. 2. 3. …	Главная инспекция по фитосанитарному карантину и семенному надзору
Стандартный порядок действий	Существует тесное взаимодействие с карантинно	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

	й лабораторией по определению фитосанитарного состояния подкарантинный грузов, территорий, помещений и других мест складирования и производства с/х продукции.			
Информационный материал (плакаты, памфлеты и т.д.)	Готовится к изданию Фитосанитарный атлас по карантинным объектам	1. 2. 3. …	1. 2. 3. …	1.Главная инспекция по фитосанитарному надзору и семенному контролю
Другое	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.

Отметьте, хотите ли Вы сделать доступными перечисленные выше ресурсы для других членов фитосанитарного сообщества через Международный фитосанитарный портал (МФП)?*

[X] Да. С нами можно связаться для получения любого или всех перечисленных ресурсов.

[ ] Нет. Я не согласен.

TAJKISTAN

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Пожалуйста, перечислите технические ресурсы, которые доступны персоналу, вовлеченному в фитосанитарный надзор:

Тип	**Название**	**Дата публикации**	**Описание технического ресурса**	**Автор/ Редактор**
Инструменты (напр., программное обеспечние, помощники при диагностике и т.д.)	1.Антивирусное Программное обеспечение «Лаборатория Касперского» и NOD 32	2011 год	Предотвращает проникновение вирусов и сетевых атак в персональные компьютеры	Касперский, NOD 32
Обучающие материалы	-	–	–	–
Презентации	1. Всероссийского Центр карантина растений	2010 г.	Описание о деятельности ВНИИКР	У.Ш. Магомедов
Видео	-	-	-	-
Образование с помощью интернета	1. Посещение вэб сайта translate.tut.ua	2011 г.	Перевод документов, материалов, статей, докладов с английского языка на русский язык.	
Инструкции	1. «Инструкция по борьбе с американской белой бабочкой», Москва, Агропромиздат, 2. «Инструкция по борьбе с калифорнийской щитовкой, Москва «Колос»	1985 г. 1983 г.	Применяется при обследовании и мерам борьбы с американской белой бабочкой. Применяется для обследования и мерам борьбы с калифорнийской щитовкой	Т.П. Петропавловская А.И. Сикура и др. Т.П. Петропавловская Г.М. Константинова
Руководства	1.Руководство по досмотру и экспертизе растительных и других подкарантинных материалов» Издательство «Колос», Москва.	1972 г.	Применяется при диагностике карантинных вредных организмов.	А.А. Варшалович М.Г.Шамонин
Стандартный порядок действий	–	–	–	–
Информационный материал (плакаты, памфлеты и т.д.)	Плакаты на национальном государственном языке 1.Организмњои зараррасони карантинї	2010 г.	Представлена информация о карантинных вредителях	Муъминчонов Хафиз Абдувахобович

	(Карантинные вредные организмы).		растений, болезнях растений и карантинных сорняках	
Другое				

Отметьте, хотите ли Вы сделать доступными перечисленные выше ресурсы для других членов фитосанитарного сообщества через Международный фитосанитарный портал (МФП)?*

☐

☐ Нет Я не согласен

UKRAINE

Страна:	Украина
ФИО респондента:	Шакина Елена Викторовна
Адрес:	03138 г. Киев, ул. Колосковая 7
Email:	Lena-Shybanova@rambler.ru

Пожалуйста, перечислите технические ресурсы, которые доступны персоналу, вовлеченному в фитосанитарный надзор:

Тип	**Название**	**Дата публикации**	**Описание технического ресурса**	**Автор/ Редактор**
Инструменты (напр., программное обеспечние, помощники при диагностике и т.д.)	Государственная служба по карантину растений Украины для помощи в диагностике использует ряд инструментов: Анализатор влажности пило- и лесоматериалов, Бинокуляр, Лупы, Микроскопы, Феромонные ловушки.			
Обучающие материалы	Государственная служба по карантину растений Украины использует нормативно-правовые документы согласно законодательства страны, Международные стандарты по фитосанитарным мерам, слайды на курсах повышения квалификации сотрудников.			
Презентации	- Государстенная служба по карантину растений Украины; - Амброзия полынолыстая; - Томатная моль; - Кукурузный жук			
Информационный материал (плакаты, памфлеты и т.д.)	- иллюстрированный справочник регулируемых вредных организмов в Украине. - Обзор распостранения	2011 год		Укрглавгоскарантин

	регулируемых вредных организмов в Украине на1 января 2010 года. - Карта распостранения регулируемых вредных организмов по территории Украины на 1 января 2010 года. - Презентационный буклет Укрглавгоскарантина. - Буклет 'Фитосанитарная експертиза'. - Брошура 'Карантинные лаборатории Украины'. - Брошура 'Государственные инспекции по карантину растений Украины'.			

Отметьте, хотите ли Вы сделать доступными перечисленные выше ресурсы для других членов фитосанитарного сообщества через Международный фитосанитарный портал (МФП)?*

☐ Да. С нами можно связаться для получения любого или всех перечисленных ресурсов.

☐ + Нет. Я не согласен.

UZBEKISTAN

Страна:	РЕСПУБЛИКА УЗБЕКИСТАН
ФИО респондента:	ЗАХИДОВ ФАРХАД МАХМУДОВИЧ
Адрес:	Г.Ташкент, Яккасарайский район, ул.Бобура, туп.1 дом 17, п/о 100100
Email:	glavkaruz@mail.ru

Пожалуйста, перечислите технические ресурсы, которые доступны персоналу, вовлеченному в фитосанитарный надзор

Тип	**Название**	**Дата публикации**	**Описание технического ресурса**	**Автор/ Редактор**
Инструменты (напр., программное обеспечние,	1.Антивирусное Программное обеспечение «Лаборатория Касперского»	2010 год	Предотвращает проникновение вирусов и сетевых атак в	Касперский.

помощники при диагностике и т.д.)			персональные компьютеры	
Обучающие материалы	-	–	–	–
Презентации	1. Всероссийского Центр карантина растений	2010 г.	Описание о деятельности ВНИИКР	У.Ш. Магомедов
Видео	-	-	-	-
Образование с помощью интернета	1. Посещение вэб сайта www.translate.ru	2011 г.	Перевод документов, материалов, статей, докладов с английского языка на русский язык.	
Инструкции	1. «Инструкция по борьбе с американской белой бабочкой», Москва, Агропромиздат, 2. «Инструкция по борьбе с калифорнийской щитовкой, Москва «Колос»	1985 г. 1983 г.	Применяется при обследовании и мерам борьбы с американской белой бабочкой. Применяется для обследования и мерам борьбы с калифорнийской щитовкой	Т.П. Петропавловская А.И. Сикура и др. Т.П. Петропавловская Г.М. Константинова
Руководства	1.Руководство по досмотру и экспертизе растительных и других подкарантинных материалов» Издательство «Колос», Москва.	1972 г.	Применяется при диагностике карантинных вредных организмов.	А.А. Варшалович М.Г.Шамонин
Стандартный порядок действий	–	–	–	–
Информационный материал (плакаты, памфлеты и т.д.)	Плакаты на национальном государственном языке 1.Карантин зараркунанда хашаротлар (Карантинные вредители). 2. Усимликларни карантин зараркунанда (Карантине вредители растений) 3. Усимликларни карантин касалликлари (Карантинные болезни растений). 4. Карантин бегона утлар (Карантинные сорняки)	2009 г.	Представлена информация о карантинных вредителях растений, болезнях растений и карантинных сорняках	М.Д. Сафаров Б.Э. Муродов и другие.
Другое				

Отметьте, хотите ли Вы сделать доступными перечисленные выше ресурсы для других членов фитосанитарного сообщества через Международный фитосанитарный портал (МФП)?*

☐

☐ Нет. Я не согласен.

EUROPE

ALBANIA

Country:	ALBANIA
Name of respondent:	JOSEF TEDESCHINI
Address:	AGRICULTURE UNIVERSITY OF TIRANA
Email:	ipmcrsp@icc-al.org

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Training materials	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Presentations	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Videos	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
E-learning	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Manuals	Manual for phytosanitary inspection in border points 2. Manual for phytosanitary inspection in border points	1. 2006 2. 2010	1. EU standards and protocols 2.Harmosation of Albanian practices with EU standards and protocols	1. Cards Program 2. Cards Program
Guidelines	1. Guidelines of the Minister of Agriculture, Food and Consumer Protection 'On the approval of the rules on phytosanitary measures for the restriction of fire blight (*Ervinia amylovora* Burr.) in the territory of the Republic of Albania' 2. Guidelines of the Minister of Agriculture, Food and Consumer Protection 'On the approval of the rules on phytosanitary measures for the production of potato with the absence of Ring Rot bacterium *(Clavibacter michiganensis subsp. Sepedonicus)* and other quarantine pests' 3. Guidelines of the Minister of	1. 31/01/07 2. 31/01/07 3. 31/01/07 4. 09/06/11	1.Decision of the EU Commission 2003/116/EC 2. Decisions of the EU Commission 93/85/EEC 69/464/EEC 69/465/EEC 3. Decision of the EU Commission 2003/766/EC 4.EU Directives 92/70/EEC 2001/32/EC 93/51/EC	1. Ministry of Agriculture, Food and Consumer Protection 2. Ministry of Agriculture, Food and Consumer Protection 3. Ministry of Agriculture, Food and Consumer Protection 4. Ministry of Agriculture,

	Agriculture, Food and Consumer Protection 'On the approval of the rules on the monitoring, control and quarantine measures for of the western corn rootworm, *Diabrotica virgifera* LeConte' 4. Guidelines of the Minister of Agriculture, Food and Consumer Protection 'On the rules for the recognition of protected zones and on the movement of the plants, plant products and of the other objects within an protected zone'			Food and Consumer Protection
Standard operating Procedures (SOPs)	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Advocacy Material (posters, pamphlets etc.)	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Other	1. Decision of the Council of Ministers 'On the approval of the rules on phytosanitary quarantine inspection'	1. 14/07/2010	EU DIRECTIVE 91/414/CEE	1. Council of Ministers

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP)? *

[X] Yes. We can be contacted to share any or all of the resources listed.

[ ] No. I do not agree.

LATIN AMERICA

BRASIL

País:	Maria Julia Signoretti Godoy
Nombre del encuestado:	Departamento de Sanidade Vegetal /ONPF brasileira – Secretaria de Defesa Agropecuaria do Ministerio da Agricultura Pecuaria e do Abastecimiento
Dirección:	Esplanada dos Ministerios – Bloco D= Anexo B sala 326 . Brasilia – Brasil Distrito Federal Brasil 70 043 900
Correo electrónico:	julia.godoy@agricultura.gov.br
Telefonos	+55 61 3218 270 e + 55 61 321 2903

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	Nao temos			
Procedimientos normalizados de actuación	A INSTRUÇÃO NORMATIVA Nº 52, DE 20 DE NOVEMBRO DE 2007[2]. 2. Plano de Contingencia da praga Bactrocera carambolae	2 e 3 .Elaborado em 1997 , revisão em 2006 e revisión en 2011 .-	1- Establece a lista de pragas quarentenárias presentes conforme a NIMF 19 da CIPV 2.Establece las acciones a implementar cuando de la detección o inminencia de ingreso plaga cuarentenaria presente Bactrocera carambolae en locales onde están ausentes 2 Se establecen las actividades de encuestas detección, de delimitación, prospecção e las las actividades de vigilancia fitosanitaria para el monitoreo de la plaga –Bactrocera carambolae.	1.Departamento de Sanidade Vegetal)) Coordinación del Protección de Plantas División de Prevención , Vigilancia, Controle de platas (DPCP)
Material de promoción (carteles, folletos, etc.)	1. Flys para población de áreas donde se localiza os focos da praga e as áreas consideradas de região de alto risco, medio risco	1. 2011 2. 2011 3 2007 4- 2011	1. Material de difusión sobre a mosca da carambola e as medidas restrictivas de vigilancia	1. Departamento de Sanidade Vegetal))

[2] Disponível em http://sistemasweb.agricultura.gov.br/sislegis/action/detalhaAto.do?method=consultarLegislacaoFederal

	2. Folder para ser utilizado por multiplicadores capacitados pelo Núcleo de Educaçao Sanitaria do programa 3. Cartillas sobre a mosca da carambola para o publico infantil 4. SPOTS de radio 5. Campanha educativa – filmes para TV	5- 2005	c, etc.) 2. Folder que explica as informaçoes necesarias a comunidades onde estão sendo implementados Planos Emergenciais debido a detecçao dos focos da praga. 3. Material elaborado para o publico infantil. 4 e 5 - Mensajes por medio de TV e radio. Visando sensibilizar a comunidad da legislación que prohíbe o transportar frutos hospedeiros e da importancia da erradicaçao da mosca da carambola para o agronegocio brasileiro	Coordinación del Protección de Plantas División de Prevención , Vigilancia, Controle de platas (DPCP
Otros	1. Cursos de capacitación para multiplicadores em comunidades onde se detectó a praga ou áreas consideradas de alto risco 2. Curso para técnicos sobre Implementaçao de Planos Emergenciais.	1. desde 2007 2. desde 2006	1. Capacitaçao com conteudo programático establecida pelo Nucleó Rural do Programa Nacional de Erradicação da mosca da carambola. 2. Curso para técnicos das instituições de defesa agropecuaria onde nao existe a praga. …	1. Departamento de Sanidade Vegetal)) Coordinación del Protección de Plantas División de Prevención , Vigilancia, Controle de platas (DPCP) …

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

☐ Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

☐ No. No estoy de acuerdo.

CHILE

País:	Chile
Nombre del encuestado:	Marco Muñoz Fuenzalida
Dirección:	Avda. Bulnes 79, oficina 40, Santiago Chile
Correo electrónico:	Marco.munoz@sag.gob.cl

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	1. Pagina intranet del SAG de Vigilancia agrícola 2. Registro Fitosanitario 3. SISVEG …	1. 2005 2. 2011 (en desarrollo) 3. 2005 …	1. Página que contiene procedimientos, fichas técnicas 2. Programa que permitirá conocer la situación fitosanitaria de especies hortofrutícolas del país y estatus de plagas agrícolas relevantes 3. Programa de envío de muestras y diagnóstico de las mismas. …	1. SAG-Subdepto. VICOA 2. SAG-Subdepto. VICOA 3. SAG-DPAF …
Materiales de capacitación	1. Libro de plagas en especies frutales 2. Libro de plagas en especies hortícolas y cultivos 3. …	1. 2010 2. 2009 3. …	1. índice de plagas en frutales presentes en Chile 2. índice de plagas en cultivos y hortalizas en Chile 3. …	1. Rina Acuña, SAG-subdepto. VICOA 2. Rina Acuña, SAG-VICOA 3.
Presentaciones	1. Presentación taller de Vigilancia agrícola 2. Presentación talleres de reconocimiento de Plagas cuarentenarias ausentes por especies frutales relevantes 3. Presentación taller de reconocimiento de plagas relevantes en cultivos ornamentales 4. …	1. 2008 2. 2005-2011 3. 2007 …	1. Presentación donde se aborda todos los tópicos de vigilancia agrícola 2. presentación de las principales plagas cuarentenarias ausentes y presentes para chile de diversas especies hortofrutícolas 3.presentación de plagas de especies ornamentales	1. SAG-Subdepto. VICOA 2. SAG-Subdepto. VICOA 3. SAG-Subdepto. VICOA …
Vídeos	1. 2. 3.	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Aprendizaje	1. Pagina intranet del SAG de	1. 2005	1. Página que contiene procedimientos de	1. SAG-Subdepto.

electrónico	Vigilancia agrícola 2. 3. …	2. 3. …	vigilancia y trampeo agrícola, fichas técnicas 2. 3.	VICOA 2. 3. …
Manuales	1. Manual de vigilancia agrícola 2. Manual de trampeo agrícola 3. Manual de gastrópodos 4. Manual de VITES …	1. 2008 2. 2009 3. 2009 4. 2008 a la fecha …	1. Metodología de vigilancia agrícola 2. Metodología del trampeo agrícola 3. Metodología para la vigilancia de gastrópodos 4. Metodología de vigilancia para especies frutales relevantes	1. SAG-Subdepto. VICOA 2. SAG-Subdepto. VICOA 3. SAG-Subdepto. VICOA 4. SAG-Subdepto. VICOA
Directrices	1. NIMF 2. 3. …	1. 2009 2. 3. …	1. Listado de NIMF 2. 3. …	1. FAO 2. 3. …
Procedimientos normalizados de actuación	1. Plan de contingencia 2. 3. …	1. 2010 2. 3. …	1. Procedimientos frente detección de plagas exóticas 2. 3.	1. SAG-DPAF 2. 3. …
Material de promoción (carteles, folletos, etc.)	1. Folletos de plagas del cultivo de la papa (Thecaphora solani, Globodera rostochiensis, Globodera pallida y Ralstonia solanacearum, etc) 2. Afiches de plagas cuarentenarias ausentes (HLB-Psa-PPV-Erwinia chrysantemi pv. dianthicola, Homalodisca vitripennis, etc. 3. Folletos plagas de viveros 4. Folletos de vigilancia agrícola	1. 2008 en adelante 2. 3. …	1. Divulgación de plagas cuarentenarias ausentes y presentes 2. 3.	1.SAG-VICOA 2. 3. …
Otros	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

☐ Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

☐ No. No estoy de acuerdo.

COLOMBIA

País:	Colombia
Nombre del encuestado:	Emilio Arévalo Peñaranda
Dirección:	Cra. 41 No. 17-81 Bogotá, Colombia
Correo electrónico:	emilio.arevalo@ica.gov.co

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	1. Sistema de Información Epidemiológica y Vigilancia Fitosanitaria (SISFITO). 2. Crop Protection Compendium 3. Centros Nacionales de Investigación agropecuaria (CNI´S), 4. Seccionales de investigación y transferencia de tecnología de la Corporación Colombiana de Investigación Agropecuaria (CORPOICA), Instituto Colombiano Agropecuario (ICA) y el Centro de Investigación de Agricultura Tropical (CIAT), 5. Universidades y bibliotecas especializadas en el área de fitopatología, 6. Bases de datos de la Asociación Colombiana de Fitopatología y Ciencias Comunes, 7. fuentes on line y off line de literatura de carácter científico y confiable de donde se recopilará la información necesaria para el desarrollo del proyecto.	1. 2011 2. 2006 3, 4, 5, 6, 7. Diversos años.	1. Plataforma que integra las actividades del área de vigilancia, así como la base de datos de plagas y al área de diagnóstico. 2. Base de datos de información fitosanitaria elaborada. 3, 4, 5, 6, 7. Investigaciones, publicaciones generales y específicos (cultivos de importancia económica, patógenos, enfermedades, etc.). 4.Informes de la Dirección técnica de diagnostico del ICA	1. ICA (Dirección Técnica de Epidemiologia y Vigilancia Fitosanitaria) 2. Reino Unido y la FAO. 3. Diversos autores
Materiales de capacitación	1. Revistas científicas 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. Cenipalma, Cenicafé, Cenicaña, Corpoica, CIAT, Socolen, Ascolfi. 2. 3. …
Presentaciones	1. Plagas y enfermedades de la caña	1.	1.	1. Cenicaña

	2. 3. …	2. 3. …	2. 3. …	2. 3. …
Vídeos	1. Videos de plagas de importancia cuarentenaria 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. Ceniflores – Ica 2. 3. …
Aprendizaje electrónico	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Manuales	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Directrices	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Procedimientos normalizados de actuación	1. Procedimiento para la atención de una alerta y/o emergencia fitosanitarias 2. Procedimiento para el desarrollo de Análisis de Riesgo de Plagas para Plantas Productos Vegetales y Otros Artículos Reglamentados. 3. Manual de Procedimientos para la Inspección Fitosanitaria de Predios Selecciones. 4. Manual de Procedimientos para la Verificación de las Notificaciones sobre Ocurrencias de Plagas. 5. Procedimiento para el monitoreo y/o prospección de plagas de palto. 6. Directiva de Procedimientos para la instalación, Mantenimiento y evaluación d las redes de monitoreo preventivo contra plagas cuarentenarias tipo A1 (*Anthonomu grandis*, Boheman; *Tecia solanivorara*. Povolny; *Trogoderma granarium* Everts.	1. 2010 2. 2006 3. 2006 4. 2006 5. 2010 6. 2000	1. Establece las acciones a implementar ante la detección o inminencia de ingreso de una plaga reglamentada 2. Se 3. Se establecen las actividades para el registro e inspección fitosanitaria de los predios seleccionados. 4.- Se 5. Establece las actividades de vigilancia fitosanitaria para el monitoreo de plagas en las áreas de producción de palto. 6. Establece los requerimientos y actividades a realizar de los sistemas de monitoreo preventivos contra plagas cuarentenarias no presentes en el país.	1. SENASA (SARVF/SCV-DSV) 2. SENASA (SARVF-DSV) 3. SENASA (SARVF-DSV) 4. SENASA (SARVF-DSV) 5. SENASA (SARVF-DSV) 6. SENASA (SARVF-DSV)

Material de promoción (carteles, folletos, etc.)	1. Alerta Fitosanitaria por HLB 2. Video: Investigaciones y publicaciones con responsabilidad. 3. Directorio	1. 2011-2012 3. 2010	1. Material de difusión sobre HLB y su vector (historietas, afiches, trípticos, volantes, boletines técnicos, etc.) 3. Explica las consecuencias de realizar reportes de plagas en el país sin tener la suficiente evidencia científica y confiable.	ICA(Dirección Técnica de Epidemiologia y Vigilancia Fitosanitaria)
Otros	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

[X] Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

[ ] No. No estoy de acuerdo.

CUBA

País:	Cuba
Nombre del encuestado:	Centro Nacional de Sanidad Vegetal
Dirección:	Ayuntamiento No 231 entre San Pedro y Lombillo, Plaza de la Revolución
Correo electrónico:	aurelio@sanidadvegetal.cu

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título: Programa de Defensa Ralstonia solanacearum	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	1. Protocolo de Diagnóstico, Laboratorio de Bacteriología: Diagnóstico de *Ralstonia solanacearum*. LCCV/PD 01.006, 1era. Edición, 2. 3. …	1. Octubre 2009 2. 3. …	1. Describe el procedimiento para el procesamiento de las muestras y el diagnóstico 2.. 3. …	1. Laboratorio Central de Cuarentena Vegetal, Sistema de Gestión de Calidad 2.. 3. …
Materiales de capacitación	1. Enfermedades bacterianas de la Papa. Informe Técnico. Laboratorio de Bacteriología, 2. 3.	1. Julio de 2003 2. 3. …	1. Actualización de la información técnica en función del control de la plaga. 2. 3. …	1. LCCV, CNSV. 2. 3. …
Presentaciones	1. El Marchitamiento Bacteriano (*Ralstonia solanacearum*): Situación Actual. Presentación para Seminario Nacional de Jefes e Inspectores de Cuarentena., CNSV. 2. El Marchitamiento Bacteriano (*Ralstonia solanacearum*): Situación Actual. Presentación para Reunión Nacional de Especialistas Provinciales de Bacteriología. 3. EL MARCHITAMIENTO BACTERIANO: una antigua enfermedad, un reto actual para la horticultura. Presentación para Evento del Instituto de Investigaciones Hortícolas, Liliana Dimitrova.	1. Marzo de 2010 2. Marzo de 2010 3. Noviembre de 2006 …	1. Capacitación técnica 2. Capacitación técnica 3. Situación actualizada de los avances de la aplicación del Programa de Defensa. …	1. Laboratorio de Bacteriología, LCCV 2. Laboratorio de Bacteriología, LCCV, CNSV. 3. Laboratorio de Bacteriología, LCCV, CNSV …
Vídeos	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Aprendizaje electrónico	1. El Marchitamiento Bacteriano 2. 3. …	1. Febrero de 2009 2. 3. …	1. Descripción de la plaga. Síntomas y medidas de Control. 2. 3. …	1. CNSV - INISAV 2. 3. …
Manuales	1. Manejo Integrado de Plagas. Manual Técnico 2.	1. 2007 2. 3.	1. Libro de Manejo de Plagas 2.	1. Colectivo de Editores y Autores del

	3. …	…	3. …	CNSV CUBA – Organización Entre Pueblos España – Gruppo di Volontariato Civile Italia 2. 3.
Directrices	1. Programa de Defensa: *Ralstonia solanacearum* (Smith) Yabuuchi et al., Versión 03. 2. 3. …	1. Marzo de 2009 2. 3. …	1. Procedimiento a seguir para la vigilancia y el plan de acciones para el control de brotes. 2. 3. …	1. Centro Nacional de Sanidad Vegetal (CNSV) 2. 3.
Procedimientos normalizados de actuación	1. Metodología para el análisis de las aguas de irrigación como posible fuentes de inóculo de la bacteria cuarentenada *Ralstonia solanacearum* (Smith) Yabuuchi et al., 2. Metodología para el análisis de suelos zonas con posible contaminación por *R. solanacearum* (Smith) Yabuuchi et al., m plantas indicadoras de tomate. 3.	1. Mayo de 2009 2. Agosto de 2004. 3. …	1. Indica el procedimiento a seguir para la toma de muestras. 2. Indica el procedimiento a seguir para la toma de muestras 3.	1. Centro Nacional de Sanidad Vegetal. 2. Centro Nacional de Sanidad Vegetal 3.
Material de promoción (carteles, folletos, etc.)	1.Vigilancia Fitosanitaria Plagas Cuarentenarias 2. 3. …	1. Enero 2000. 2. 3. …	1. información técnica e indicaciones para la vigilancia a Técnicos y productores. 2. 3. …	1. Centro Nacional de Sanidad Vegetal – Asociación Nacional de Agricultores pequeños 2. 3.
Otros	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

☐ Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

☐ No. No estoy de acuerdo.

DOMINICAN REPUBLIC

País:	República Dominicana
Nombre del encuestado:	Leonardo Mateo Valenzuela
Dirección:	Av. JF. Kennedy km. 6 ½, Santo Domingo
Correo electrónico:	lmateo-01@hotmail.com

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	8. Base de datos de Sanidad Vegetal 9. Publicaciones Científicas Online 10. Base de datos de la CIPF, OIRSA, Universidades,	1. 2009 2. Varios años	1. Integra todas las actividades de la base de de datos de diagnostico de plagas 2. Publicaciones generales de cultivos, Insectos y hongos	1. DSV, Rep. Dominicana 2. FAO 3. OIRSA
Procedimientos normalizados de actuación	1. Manual de Procedimientos cuarentenarios para la importación de Plantas, Productos vegetales y Otros Artículos Reglamentados. 2. Procedimiento para el Desarrollo de Análisis de Riesgo de Plagas. 3. Procedimiento para la atención de una alerta y/o emergencia fitosanitarias. 4. Manual de Procedimientos para la Inspección Fitosanitaria de las diferentes partes Seleccionadas.	1. 2008 2. 2008 3. 2008	1. Se establecen las actividades para el registro e inspección fitosanitaria de las partes vegetales seleccionadas. 2. Establece las acciones a implementar ante la detección de ingreso de una plaga reglamentada. 3. Establece las actividades de vigilancia fitosanitaria para el monitoreo de plagas en las áreas de producción.	1. Ministerio de Agricultura (Sanidad Vegetal) 2. Ministerio de Agricultura (Sanidad Vegetal) 3.- Ministerio de Agricultura (Sanidad Vegetal)
Material de promoción (carteles, folletos, etc.)	1. Alerta Fitosanitaria por HLB 2. Afiches, brochures, cuña radial y televisiva (HLB) 3. Afiches, brochures (Ceratitis capitata y Achatina áulica,	1. 2008-2011	1. Material de difusión sobre HLB y su vector (historietas, afiches, trípticos, volantes, boletines técnicos, etc.) 2. Boletín que describe algunos insectos y patógenos asociados a cultivos importantes. Incluyen fotografías de los daños y los especímenes.	1. Ministerio de Agricultura (Sanidad Vegetal)
Otros	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

[x] Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

[ ] No. No estoy de acuerdo.

MEXICO

País:	México
Nombre del encuestado:	Dr Francisco Javier Trujillo Arriaga
Dirección:	Guillermo Pérez Valenzuela 127, Del Carmen, Coyoacán, Mex., D. F. CP 04100
Correo electrónico:	jtrujillo@senasica.gob.mx abel.lopez@senasica.gob.mx rigoberto.gonzalez@senasica.gob.mx

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	SCOPE: Sistema Coordinado para la Vigilancia de Plagas Reglamentadas y su Epidemiología.	2010	Es una plataforma web en la que se envían datos de la vigilancia de plagas en México, así mismo en dicha plataforma se refleja el estatus fitosanitario de las mismas.	SENASICA/DGSV
Materiales de capacitación	Fichas técnicas y Guías de síntomas y daños.	2010	Son documentos técnicos de referencia para la vigilancia de plagas en México.	SENASICA/DGSV
Presentaciones	Visión y Misión de la Vigilancia Epidemiológica Fitosanitaria en México.	2010	Se establece el alcance de la vigilancia de plagas en México.	SENASICA/DGSV
Vídeos	Palomilla del Nopal	2010	Es un material audiovisual de la importancia del nopal en México y del riesgo fitosanitario que tiene como la palomilla del nopal.	SENASICA/DGSV
Aprendizaje electrónico	Gotowebinar	2010	Es una herramienta que permite proveer capacitación a distancia sobre las plagas que se vigilan en México.	SENASICA/DGSV
Manuales	Lineamientos técnicos para la elaboración, revisión y dictaminación de programas de trabajo y estrategias de vigilancia epidemiológica fitosanitaria.	2010	Es un documento técnico de referencia para la elaboración de programas de trabajo anuales según las plagas que se vigilan en cada Estado y de acuerdo a las estrategias que apliquen para la detección oportuna.	SENASICA/DGSV
Directrices	Ninguna	Ninguna	Ninguna	Ninguna
Procedimientos normalizados de actuación	Protocolo de respuesta y comunicación ante la detección de una plaga cuarentenaria (PRyC)	2010	Es un procedimiento, que aplica: 1. **Cuando se identifica una plaga**	SENASICA/DGSV

			de importancia cuarentenaria por primera vez en una área. 2. Está más allá de la capacidad de una **sola área técnica** para responder con eficacia en el ámbito de operaciones; 3. Cuando las acciones contra las plagas en otras regiones del país son significativamente **una amenaza para la agricultura nacional**. 4. Requiere una **atención urgente**;	
Material de promoción (carteles, folletos, etc.)	Se disponen de carteles y folletos de las plagas bajo vigilancia epidemiológica fitosanitaria.	2010	Es un material visual para productores y técnicos, que permita que ellos mismos sean observadores centinela en sus propios cultivos a fin que reporten la sospecha de la presencia de plagas cuarentenarias al Programa de Vigilancia Epidemiológica Fitosanitaria.	SENASICA/DGSV
Otros				

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

[X] Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

[ ] No. No estoy de acuerdo.

PANAMA

País:	
Nombre del encuestado:	
Dirección:	
Correo electrónico:	

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	1. Programas de radio 2. Entrevistas en Noticieros locales y programas de interés agropecuarios 3. …	1. Durante el año 2010 2. 3. …	1. Emisora de la localidad 2.Televisoras local 3. …	1. Dep. divulgación 2.Dep. Divulgación 3. …
Materiales de capacitación	1. Desplegables 2. Afiches 3. Banners …	1.2009 2.2010 3.2011 …	1. Programa Moscas de la fruta 2. Manejo Integrado de Moscas de la Fruta 3. Diferentes plagas de interés fitosanitario …	1. Dep. divulgación 2. Dep. Divulgación 3.Dep. Divulgación …
Presentaciones	1. Presentaciones en power point 2. 3. …	1. 2009 2. 2010 3. 2010 …	1.Charlas a Través de presentaciones en power point sobre plagas de interés fitosanitario 2. 3. …	1. Dep. divulgación 2. Dep. divulgación 3. Dep. divulgación …
Vídeos	1. Ciclo biológico de moscas de la fruta 2. Manejo Integrado de Moscas de la fruta 3. …	1. 2009 2. 2010 3. 2011 …	1. Se presentan videos a técnicos 2. Productores 3. Estudiantes …	1. Dep. divulgación 2. Dep. divulgación 3. Dep. divulgación …
Aprendizaje electrónico	1. Se coordina a través de esta herramienta, con los técnicos regionales las diferentes actividades de capacitación dirigidas a productores, técnicos, estudiantes y demás. 2. Se comparte información técnica con los diferentes colaboradores de la sanidad vegetal. 3. …	1. 2. 3. …	1. 2. 3. …	1. Dep. divulgación 2. Dep. divulgación 3. Dep. divulgación …
Manuales	1. Manejo Integrado de Moscas de la fruta 2. 3. …	1. 2009 2. 2010 3. 2011 …	1. 2. 3. …	1. Dep. divulgación 2. Dep. divulgación 3. Dep. divulgación …
Directrices	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Procedimientos normalizados de actuación	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Material de promoción (carteles, folletos, etc.)	1. Desplegables 2. Folleto 3. Banners …	1. 2. 3. …	1. 2. 3. …	1. Dep. divulgación 2. Dep. divulgación 3. Dep. divulgación …
Otros	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

[X] Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

[ ] No. No estoy de acuerdo.

PARAGUAY

País:	Paraguay
Nombre del encuestado:	Derlis Willian Caballero González
Dirección:	Humaita 145 e/ Ntra. Sra. De la Asunción e Ind. Nacional, Edif. Planeta I, Asunción, Paraguay
Correo electrónico:	tacuaree@gmail.com

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	1. Crop Protecction Compendium 2. Compendio de Plagas de Presentes 3. Diversas Publicaciones nacionales e internacionales 4. Internet 5.Materiales varios de divulgación	1. 2007 2. 2008 3. Varios 4. 5.	1. Base de datos con información de plagas 2. Base de datos informatizado, formato Excel 3. Publicaciones generales y especificos 4. Paginas Web de los Centros Internacionales de Investigación. Universidades, ONPF´s. 5. Tripticos, afiches, tarjetas de plagas, volantes, manuales	1. CABI 2. DVF – SENAVE 3. Varios 4. Varios 5. Varios
Materiales de capacitación	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Presentaciones	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Vídeos	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Aprendizaje electrónico	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Manuales	1. Manual de Hormigas Cortadoras 2. Manual de Plagas Presentes en el Paraguay 3. Manual Técnico de identificación a campo del Huanglonbing de los cítricos y el insecto vector, *Diaphorina*	1. 2012 2. 2012 3. 2009 …	1. 2. 3.	1. DPV - SENAVE 2. DPV - SENAVE 3. DCV SENAVE

	citri …			
Directrices	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Procedimientos normalizados de actuación	1. Resolución Nº 468/09 'Por la cual se establece la obligatoriedad de denunciar la presencia de sintomatología sospechosa de la plaga conocida como Huanglonbing (*Candidatus Liberibacter* spp,) y se implementa el Programa de Vigilancia y su detección precoz en cítricos' 2. Resolución Nº 115/09 ' Por la cual se implementa los Requisitos y Procedimientos para la inscripción y registros de productores, monitoreo e inscripción de galpones de empaque para la implementación del Sistema de Mitigación de Riesgos para la plaga *Anastrepha grandis* (Mosca sudamericana de las cucurbitáceas) en frutas frescas de cucurbitáceas para la exportación al mercado argentino' 3. Resolución Nº 327/11 'Por la cual se establece el procedimiento para las prospecciones de cultivos agrícolas' 4. Resolución Nº 163/10 ' Por la cual se declara como áreas protegidas a las zonas productoras de banana del país' …	1. 2009 2. 2000 3. 2011 4. 2010		1. SENAVE 2. SENAVE 3. SENAVE 4. SENAVE
Material de promoción (carteles, folletos, etc.)	1. Destrucción de rastrojos del algodonero 2. Alerta Fitosanitaria: *Lobesia botrana* 3. Polilla de la vid (*Lobesia botrana*) 4. Psilido Asiatico de los cítricos (*Diaphorina citri*) 5. *Diaphorina citri* 6. Pausa Fitosanitaria en soja 7. Plagas asociadas al cultivo de mango (*Manguifera indica*) 8. Destrucción de rastrojos del algodonero 9. Chinche del Eucalipto (*Thaumastocoris peregrinus*) 10. Mosca negra de los cítricos (*Aleurocanthus woglumi*) 11. Alerta fitosanitaria: Caracol Gigante Africano (*Achatina fullica*) 12. Alerta fitosanitaria: Sigatoka Negra	1. 2012 2. 2012 3. 2012 4. 2012 5. 2012 6. 2012 7. 2012 8. 2012 9. 2012 10. 2012 11. 2012 12. 2012 13. 2012 14. 2012 15. 2012 16. 2012 17. 2012 18. 2012	1. Afiches 2. Afiches 3. Trípticos 4. Trípticos 5. Afiches 6. Afiches 7. Trípticos 8. Trípticos 9. Trípticos 10. Trípticos 11. Trípticos 12. Trípticos 13.Trípticos 14. Afiches 15. Trípticos 16. Volantes 17. Trípticos 18. Trípticos	1. DPV - SENAVE 2. DPV - SENAVE 3. DPV – SENAVE 4. DPV - SENAVE 5. DPV - SENAVE 6. DPV - SENAVE 7. DPV - SENAVE 8. DPV - SENAVE 9. DPV - SENAVE 10. DPV - SENAVE

	(*Mycosphaerella fijiensis*) 13. Analisis de Riegos de Plagas 14. Alerta fitosanitaria:Caracol Gigante Africano (*Achatina fúlica*) 15. *Diaphorina citri* 16. Funciones de la DPV 17. Mosca negra de los cítricos (*Aleurocanthus woglumi*) 18. Mosca de la fruta en mango 19. Plagas Presentes en el Paraguay	19. 2012	19. Tarjetas plastificadas	11. DPV - SENAVE 12. DPV - SENAVE 13. DPV - SENAVE 14. DPV - SENAVE 15. DPV - SENAVE 16. DPV - SENAVE 17. DPV - SENAVE 18. DPV – SENAVE 19. DPV - SENAVE
Otros	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

☐ Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

☐ No. No estoy de acuerdo.

PERU

País:	PERU
Nombre del encuestado:	Johny Naccha Oyola
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Correo electrónico:	jnaccha@senasa.gob.pe

Enumere los recursos técnicos de que dispone el personal que participa en la vigilancia de plagas:

Tipo	Título	Fecha de publicación	Descripción del recurso técnico	Autor/Editor
Herramientas (por ej., programas informáticos, medios de diagnóstico, etc.)	1. Sistema Integrado de Gestión de Sanidad Vegetal 2. Crop Protection Compendium 3. Diversas publicaciones científicas (Sociedad Entomológica del Perú, Sociedad Latinoamericana de Fitopatología, CABI, ELSEVIER, CIP, etc.)	1. 2004 2.2007 3. Diversos años	1.Plataforma que integra las actividades del área de vigilancia, así como la base de datos de plagas y al área de diagnóstico 2.Base de datos con información de plagas 3. Publicaciones generales y específicos (cultivos, familias de insectos, hongos, MIP, diccionario forestal, etc.).	1.SENASA (SARVF-DSV) 2.CABI 3. Diversos autores
Procedimientos normalizados de actuación	1. Procedimiento para la atención de una alerta y/o emergencia fitosanitarias 2. Procedimiento para el desarrollo de Análisis de Riesgo de Plagas para Plantas Productos Vegetales y Otros Artículos Reglamentados. 3. Manual de Procedimientos para la Inspección Fitosanitaria de Predios Selecciones. 4. Manual de Procedimientos para la Verificación de las Notificaciones sobre Ocurrencias de Plagas 5. Procedimiento para el monitoreo y/o prospección de plagas de palto 6. Directiva de Procedimientos para la instalación, Mantenimiento y evaluación d las redes de monitoreo preventivo contra plagas cuarentenarias tipo A1 (*Anthonomu grandis*, Boheman; *Tecia solanivorara*. Povolny; *Trogoderma granarium* Everts.	1. 2010 2. 2006 3. 2006 4. 2006 5. 2010 6. 2000	1. Establece las acciones a implementar ante la detección o inminencia de ingreso de una plaga reglamentada 2. Se 3. Se establecen las actividades para el registro e inspección fitosanitaria de los predios seleccionados. 4. Se 5. Establece las actividades de vigilancia fitosanitaria para el monitoreo de plagas en las áreas de producción de palto. 6. Establece los requerimientos y actividades a realizar de los sistemas de monitoreo preventivos contra plagas cuarentenarias no presentes en el país.	1. SENASA (SARVF/SCV-DSV) 2. SENASA (SARVF-DSV) 3. SENASA (SARVF-DSV) 4. SENASA (SARVF-DSV) 5. SENASA (SARVF-DSV) 6. SENASA (SARVF-DSV)

Material de promoción (carteles, folletos, etc.)	1. Alerta Fitosanitaria por HLB 2. Boletín: Hongos e insectos forestales en el Perú	1. 2010-2011 2. 2009	1. Material de difusión sobre HLB y su vector (historietas, afiches, trípticos, volantes, boletines técnicos, etc.) 2. Boletín que describe algunos insectos y patógenos asociados a las especies forestales en el Perú. Incluyen fotografías de los daños y los especímenes.	1. SENASA (SARVF-DSV) 2. SENASA (SARVF-DSV)
Otros	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indique su deseo de colaboración para poner a disposición de otros miembros de la comunidad fitosanitaria los recursos antes indicados a través del Portal Fitosanitario Internacional (PFI)

[x] Sí. Pueden ponerse en contacto con nosotros para compartir todos o alguno de los recursos indicados.

[ ] No. No estoy de acuerdo.

List the technical resources that are available to the staff involved in pest surveillance

NEAR EAST

Summary result
Only eight countries responded to this questionnaire

Type		Country	Title	Date of publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	7 countries responded to the question	Palestine	1. Date loggers 2. Trapping records & report 3. Three types of traps	2008, 2009 & 2010	1. Symbol SPT terminals 2. Excel Forum 3. Yellow sticky, handmade, frutect traps	
		Morocco	1. National programme for monitoring Peach Fruit Fly 2. National programme for monitoring RPW 3. National programme for monitoring fire blight 4. National programme for monitoring Terstiza 5. National programme for monitoring Aharka 6. National programme for monitoring pine nematode	1. 2010 2. 2010 3. 2007 4. 2010 5. 2010 6. 2010	Guide	MoA

		Mauritania	1. Incubators 2. Electronic microscope & magnifier 3. Cooling equipments and refrigeration	2009		FAO
		Sudan	1. Crop protection compendium 'software' 2. Trapping guidelines for area-wide fruit fly programmes 3. Agriculture Research Corporation 4. *Dematiaceous hyphomycetes* 5. Seed pathology Volume 2 6. Plant Pathology The fungi and plant diseases of the Sudan agricultural crops nematodes An annotated list of seed-borne diseases Nematode Atlas Pests of Crops in Northeastern and Central Africa, with	1. 2007 6. 2003	**Full datasheets** – over 3 500 pests and disease, natural enemies and crops. **Basic information** – on more than 20 000 more species **Latest scientific findings** – 169 000 bibliographic records updated weekly **In depth information** – more than 8 600 library and full text journals & conference articles Use of traps lures Identification of dematiaceous fungi Identification of dematiaceous fungi Identification of seed- borne	CAB International International Atomic Energy Agency H. Schmutterer

			Particular Reference to the Sudan. Tool, traps GPS, lures, quadrats		pathogens Identification of pathogens	Stuttgart: gustav Fischer Verlag. Pp296 DM 58
		Syria	1. Forecasting tools for the diseases	1997	Private company with Ministry	
		Qatar	1. An introduction to the study of insects 2. Date Palm Tree pests in Oman		1.Reference book for pest identification 2.Reference book with photography for date palm trees pests	1.Borror Triplehom Jonhson 2.MagdyMohamed Kenawy
		UAE	1. Extension brochures 2. Guidlines for pest identification	1.1991 2.1991	1. Hard copy brochures 2. Hard copy brochures	1. MoEW 2. MoEW
Training materials	6 responses	Palestine	1. Powerpoint Presentations 2. Workshop & Scientist Meeting 3.Field Training 4.Local & foreign training courses	2008, 2009 & 2010	1. Planning the Trapping Network 2. Methods of Trapping, reporting & servicing traps 3. Supervising the trapping network …	MoA
		Mauritania	1.Electronic devices 2. Computers			Plant Protection Agency
		Sudan	1. Presentation 2. Commodity pest list	1969		1. FAO 2. PPD 3. PPD *4. Wilson*

			3. Formates 4. Surveillance reports of other countries, i.e Kenya			*Songa, Pathologist* *Francis Nang'ayo, Entomologist* *Moses Nyongesa, Nematologist* Boaz Andetto, ICT Specialist
		Syria	1. Training courses (lectures) 2. Field days 3. Workshops 4. FFS (Field Farmers School		Extension directorate (Ministry of Agriculture)	1. Plant protection directorate 2. Ministry of Agriculture
		Qatar	1.Extension publication for Citrus pests 2.Aphids pests 3.Mealy bug pests 4.important pests of Date Palm Tree		1.list of important pests of citrus 2.Extension publication of pests in Qatar 3. Extension publication of pests in Qatar 4. Extension publication of Date Palm Tree pests in Qatar	Plant protection and Plant Quarantine division
		UAE	1.Combating RPW in UAE		Hard copy brochures Brochures and booklets about the control of RPW	MoEW
Presentations	5 responses	Palestine	1.Peak population of the Insect 2.Regular Evaluate Meeting and Feedback	1.2008 2.2009&2010	1.discussion meeting every 2 weeks for evaluating data collected in each site	MoA

		Morocco	1.fire blight 2.Red Palm Weevil	1.2009 2.2010	1.Integrated Presentations with live images 2. Integrated Presentations with live images	National Food safety office for product safety
		Sudan	ISPM 6 guidelines for surveillance			FAO
		Syria	1. pest control 2. The most important pests on the major crops 3. FFS			1. Plant protection directorate, Ministry of Agriculture
		UAE	1.Training courses			
Videos	4 responses	Palestine	1. About natural enemies		1.Educating agronomist for diagnosing natural enemies from target insect	MoA
		Morocco	National Food safety office for food industry safety: regulation & specialization	2010	Video	National Food safety office for food industry safety
		Syria	Applying the IPM Program			Ministry of Agriculture
		UAE	TV Video Films	Regularly in Public media		MoEW
E-learning		Palestine	1. Contacting journals for scientific	2007	1.Using publication papers for designing	Tishreen University Journals Bio-Science Services

			papers 2.benfit from other countries experience 3.methods of insect incubation		experiments 2.Using other experience in determining No. of generations of the insects	
	3 responses	Morocco	Official website for National Food safety office for food industry safety	2010	Regulatory framework Legislative texts Responsibilities and specialization Achievements	Communication agency of the National Food safety office for food industry safety
		UAE	CDs MoEW website publication			MoEW
Manuals	4 responses	Morocco	1. Tomato leaf Minor	1. 2010	1. Booklet manuals	National Food safety office for food industry safety
		Mauritania	1. Manuals describing the technical inspection of tomatoes	2002		Plant Protection Agency
		Syria	1. Guide for applying IPM 2. Guide for FFS			1. Ministry of Agriculture 2. FAO
		Qatar	1. Extension publication for Citrus pests 2. Aphids pests 3. Mealy bug pests 4. Important pests of Date	1. 2005 2. 2005 3. 2005 4. 2007	1.list of important pests of citrus 2.Extension publication of pests in Qatar 3. Extension publication of pests in Qatar 4. Extension	

			Palm Tree		publication of Date Palm Tree pests in Qatar	
Guidelines	6 responses	Palestine	1.Monitoring Olive Fruit Fly in Palestine 2.comparison of the efficiency of the 3 types of traps 3.Monotring for Med.Fruit Fly	2008, 2009 &2010 2003	1.Peak populations of Olive Fruit Fly 2.Effeciancy of traps in monitoring and mass trapping	MoA
		Morocco	Preliminary and fundamental Phytosanitary programmes in Morocco	2009	Guidelines with images	National Food safety office for food industry safety
		Mauritania	Working plan for plant inspection offices	1991		Plant Protection Agency
		Sudan	Trapping Guidelines For Area-Wide Fruit Fly Programmes			FAO
		Syria	FFS			FAO
Standard operating Procedures (SOPs)	4 responses	Palestine	1.SO Procedures T01- T05 2. SO Procedures FS01 –FS05		Standard operating Procedures for projects using sterile insect technique	1. FAO/IAEA
		Morocco	Risk Analysis for the RPW – application of ISM# 2	2009	Report	Working group for conducting PRA

		Syria	1. Visiting the farmers to solve their problems 2. Workshops			
		Qatar	1. International visits 2. Use of Traps			
Advocacy Material (posters, pamphlets etc.)	7 responses	Palestine	1. Med–fly control 2.Olive Pests Poster 3.Brochures		1. A special poster for introducing medfly traps to farmer & agronomist 2.A special poster containing all economic olive pets 3.Brochures about trapping network 4.Brochures about fruit incubation	MoA
		Morocco	1. Fire Blight: Symptoms & control methods 2. RPW	1.2010 2.2009	1.Posters 2.Poster + booklet	National Food safety office for food industry safety
		Mauritania	1. Posters for pests 2. Posters for elaboration of broad lines to conduct surveillance at ports	2008		Plant Protection Agency
		Sudan	Fruit flies, *Orobanche* ,			PPD, States

			Mesquite			
		Syria	1. Poster for plant protection conference 2. Poster for the most important natural enemies	1. 10-2010 2. 08-2011		1. Ministry of Agriculture 2. Ministry of Agriculture
		Qatar	1. Extension publication for Citrus pests 2. Aphids pests 3. Mealy bug pests 4.important pests of Date Palm Tree		1. List of important pests of citrus 2. Extension publication of pests in Qatar 3. Extension publication of pests in Qatar 4. Extension publication of Date Palm Tree pests in Qatar	Plant protection and Plant Quarantine division
		UAE	A number of posters and pamphlets	Regularly	Dissemination	
Other	2 responses	Morocco	1. Periodical News	According to circumstances	Technical and extension cards for the phytosanitary situation	
		UAE	Agricultural Exhibitions	Regularly	Dissemination	

MOROCCO

استخدام هذه الاستمارة الإلكترونية لإدخال المعلومات

البلد:	المملكة المغربية
اسم المجيب:	عبد الرحمن فاطني
العنوان:	المصلحة الإقليمية لحماية النباتات لافران ص.ب 290 ازرو - المغرب
العنوان الإلكتروني:	afatni@yahoo.fr

يرجى وضع قائمة بالموارد الفنية المتوافرة للعاملين المعنيين بمراقبة الآفات:

النوع	العنوان	تاريخ النشر	وصف الموارد الفنية	الكاتب/المحرر
الأدوات (مثل البرمجيات، مساعدات التشخيص، إلخ)	1- البرنامج الوطني لمراقبة دبابة الخوخ 2- البرنامج الوطني لمراقبة سوسة النخيل الحمراء 3- البرنامج الوطني لمحاربة اللفحة النارية 4- البرنامج الوطني لمحاربة الترستيزا 5- البرنامج الوطني لمراقبة فيروس الشاركا 6- البرنامج الوطني لمراقبة خيطيات الصنوبر	2010-1 2010-2 2007-3 2010-4 2010-5 2011-6	دليل دليل دليل دليل دليل دليل	المكتب الوطني للسلامة الصحية للمنتجات الغذائية.
مواد التدريب	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...	-1 -2 -3 ...
العروض	1- اللفحة النارية 2-سوسة النخيل الحمراء	2009-1 2010-2	1-عروض متكاملة مع صور حية 2- عروض متكاملة مع صور حية	المكتب الوطني للسلامة الصحية للمنتجات الغذائية.
الفيديو	المكتب الوطني للسلامة الصحية للمنتجات الغذائية : التنظيم و الاختصاص	2010	فيديو	المكتب الوطني للسلامة الصحية للمنتجات الغذائية.
التعلم الإلكتروني	الموقع الرسمي للمكتب الوطني للسلامة الصحية للمنتجات الغذائية.	2010	التنظيم و الهيكلة النصوص التشريعية المهام و الاختصاصات الانجازات	مصلحة التواصل بالمكتب الوطني للسلامة الصحية للمنتجات الغذائية.

النوع	العنوان	تاريخ النشر	وصف الموارد الفنية	الكاتب/المحرر
الكتيبات	1- ناخرة الطماطم	1-2010.	1- كتيب	المكتب الوطني للسلامة الصحية للمنتجات الغذائية.
الخطوط التوجيهية	1- البرامج الأولية و الأساسية في الصحة النباتية للمغرب	1-2009	1- دليل بالصور ...	المكتب الوطني للسلامة الصحية للمنتجات الغذائية
إجراءات التشغيل المعيارية	تحليل الخطر الصحي لسوسة النخيل الحمراء تطبيق المعيار الدولي رقم 02	نونبر 2009 ...	تقرير	مجموعة عمل تحليل الخطر الحي بالمكتب الوطني للسلامة الصحية للمنتجات الغذائية
مواد المناصرة (مثل الملصقات والكتيبات إلخ)	1- اللفحة النارية : الأعراض و طرق الوقاية 2- سوسة النخيل الحمراء	1-2010 2-2009 3-2010	1- ملصق 2-ملصق + كتيب 3-	المكتب الوطني للسلامة الصحية للمنتجات الغذائية.
غيرها	نشرات إخبارية دورية	حسب المعطيات و الظروف	بطائق تقنية و إرشادية للحالة الصحية	المديرية الجهوية مكناس تافلالت

الرجاء تحديد مدى استعدادكم لتوفير الموارد المذكورة أعلاه إلى آخرين من مجتمع الصحة النباتية من خلال البوابة الدولية للصحة النباتية؟*

نعم. يمكن الاتصال بنا لتقاسم جزء من الموارد المذكورة أو كلها.

كلا. لا نوافق

PALESTINE

Country:	Palestine
Name of respondent:	Abdalla Dahleh
Address:	Ramallah
Email:	abdalladahla@yahoo.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Data loggers 2. Trapping Records and Reports 3. Three Types of Traps 4. Microscopes	2008, 2009 & 2010	1. Symbol SPT terminals 2. Excel Forum 3. Yellow sticky, hand made, Frutect traps …	
Training materials	1. PowerPoint presentations 2. Workshop and Scientific Meetings. 3. Field training 4. Local and foreign training courses	2008, 2009 & 2010…	1. Planning the Trapping Network 2. Methods of trapping, reporting and servicing traps 3. Supervising the trapping network	MoA
Presentations	1. Peak population of the insect 2. Regular Evaluation Meetings and feedback	2008, 2009 & 2010.	1. Discussion meeting every two weeks for evaluating data collected in each site.	MoA. …
Videos	1. About natural enemies		1. Educating the agronomists for diagnosing natural enemies from target insect.	MoA …
E-learning	1. Contacting journals for scientific papers 2. Benefit from other countries' experiences 3. Methods of insects incubation	2007	1. Using publication papers for designing our experiment. 2. Using other experiences in determining number of generations of the insects	Tishreen University Journal Bio. Sciences Series
Manuals	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Guidelines	1. Monitoring Olive Fruit Fly in Palestine 2. Comparison of the efficiency of three types of traps 3. Monitoring for Med. Fruit Fly	2008,2009&2010 2003	1. Peak populations of olive fruit fly 2. Efficiency of traps in monitoring and mass trapping	MoA
Standard operating Procedures (SOPs)	1. SO Procedure T01 - T05 2. SO Procedure FS01 - FS05	1. 2. 3. …	STANDARD OPERATING PROCEDURES For projects using the sterile insect technique	1. FAO/IAEA

Advocacy Material (posters, pamphlets, etc.)	1.Medfly Control Poster 2.Olive Pests Poster 3. Brochures	1. 2. 3. …	1. A special poster for introducing medfly traps to farmers and agronomists. 2. A special poster containing all economic olive pests. 3. Brochures about trapping network 4. Brochures about fruit incubation	1. MoA
Other	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP). *

Ye: Yes. We can be contacted to share any or all of the resources listed.

No. I do not agree.

SUDAN

Country:	Sudan
Name of respondent:	Khidir Gibril Musa
Address:	Plant Protection Directorate Pobox 14, Khartoum North Sudan
Email:	khidrigibrilmusa@yahoo.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Crop Protection compendium (software)	2007	1. **Full datasheets** – on over 3 500 pests, diseases, natural enemies and crops **Basic information** – on more than 20 000 more species **Latest scientific findings** – 169 000 bibliographic records updated weekly **In depth information** – more than 8 600 Library and Full Text journal & conference articles	CAB International
	TRAPPING GUIDELINES FOR AREA-WIDE FRUIT FLY PROGRAMMES (software)	2003	Use of traps and lures	International Atomic Energy Agency Wagramer Strasse 5 PO Box 100 A-1400 Vienna, Austria
	2. Agricultural Research Corporation (ARC) Insect collection			ARC
	3. Dematiaceous hyphomycetes	(1971)	Identification of dematiaceous fungi	M.B. ELLIS
	4. More Dematiaceous hyphomycetes	(1976)	Identification of dematiaceous fungi	M.B. ELLIS
	5. Seed pathology volume2	1977	Identification of seed-borne pathogens	PAUL NeerGaard
	6. Plant Pathology	1960	Identification of pathogens	J.G. HORSFALL & A.E.DIMOND
	The fungi and plant diseases of the Sudan	1955	Identification of fungi	S.A.J.TARR, Ph.D.
	نيماتودا المحاصيل الزراعيه agricultural crops nematodes (in Arabic)			Dr Kheiry Atrees
	An annotated list of seed-borne diseases	1990	Identification of seed-borne diseases	M.J.RICHARDSON
	اطلس الامراض النيماتوديه Nematode Atlas	2003	Identification of nematodes	Dr Sana Haroun
	Pests of Crops in Northeastern and Central Africa, with Particular Reference to the Sudan.	1969		H. Schmutterer. Stuttgart: Gustav Fischer Verlag. pp. 296, DM.58
	Tool, traps GPS, lures, quadrats,			
Training materials	1. Presentations 2. Commodity pest lists	1. 2.	1. 2.	1.FAO 2.PPD

	3. Formats 4. Surveillance reports of other countries, i.e. Kenya	3.	3.	3.PPD *4. Wilson Songa, Pathologist* *Francis Nang'ayo, Entomologist* *Moses Nyongesa, Nematologist* Boaz Andetto, ICT Specialist
Presentations	1. ISPM 6 guidelines for surveillance 2. 3. …	1. 2. 3. …	1. 2. 3. …	1.FAO 2. 3. …
Videos	1. None 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
E-learning	1. None 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Manuals	1. TRAPPING GUIDELINES FOR AREA-WIDE FRUIT FLY PROGRAMMES 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Guidelines	1. ISPM 6 2. 3. …	1. 2. 3. …	1. 2. 3. …	1.FAO 2. 3. …
Standard operating Procedures (SOPs)	1. None 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Advocacy Material (posters, pamphlets etc.)	1. Fruit flies, *Orobanche*, Mesquite 2. 3. …	1. 2. 3. …	1. 2. 3. …	1.PPD, States 2. 3. …
Other	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP). *

yes Yes. We can be contacted to share any or all of the resources listed.

No. I do not agree.

SYRIA

Country:	Syria
Name of respondent:	Lina Srewey
Address:	Ministry of agriculture – Damascus- Syria
Email:	lsrewey@gmail.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Forecasting tools for the diseases 2. 3. …	1. 1997 2. 3. …	1. Private company with Ministry of Agriculture 2. 3. …	1. 2. 3. …
Training materials	1. Training courses (lectures) 2. Field days 3. Workshops 4. FFS (Field Farmers School) …	1. 2. 3. …	1. Extension directorate (Ministry of Agriculture) 2. 3. …	1. Plant protection directorate 2. Ministry of Agriculture 3. …
Presentations	1. Pest control 2. The most important pests on the major crops 3. FFS …	1. 2. 3. …	1. 2. 3. …	1. Plant protection directorate, Ministry of Agriculture 2. 3.
Videos	1. Applying the IPM Programme 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. Ministry of Agriculture 2. 3. …
E-learning	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Manuals	1. Guide for applying IPM 2. Guid of FFS. 3. …	1. 2. 3. …	1. 2. 3. …	1. Ministry of Agriculture 2. FAO 3.
Guidelines	1. FFS 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. FAO 2. 3. …
Standard operating Procedures (SOPs)	1. Visiting the farmers to solve their problems 2. Workshops 3.	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Advocacy Material (posters, pamphlets etc.)	1. Poster in plant protection conference 2. Poster illustrating the most important natural enemies 3. …	1. 10-2010 2. 08-2011 3. …	1. 2. 3. …	1. Ministry of Agriculture 2. Ministry of Agriculture 3. …
Other	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP). *

[**] Yes. We can be contacted to share any or all of the resources listed.

[ ] No. I do not agree.

UNITED ARAB EMIRATES

Country:	United Arab Emirates
Name of respondent:	Saeed Ali Bin Awash
Address:	PO Box 1509, Dubai, UAE
Email:	saalawaash@moew.gov.ae

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Extension brochures 2. Guidelines for pest identification 3. …	1.1991 2.1991 3. …	1. Hard copy brochures 2. Hard copy brochures 3. …	1. MOEW (Ex-MAF) 2. MOEW (Ex-MAF) 3. …
Training materials	1. Combating the Red Palm Weevil (RPW) in UAE 2. 3. …	1. 2. 3. …	1. Hard copy brochures 2. Brochures and booklets about the control of RPW 3.	1. MOEW
Presentations	1. Training course 2. 3. …	1. 2. 3. …	1. 2. 3.	1. 2. 3. …
Videos	1. TV video, Films 2. 3. …	1. Regularly in public media 2. 3.	1. 2. 3. …	1. MOEW …
E-learning	1. CDs 2. MOEW website publications 3. …	1. 2. 3. …	1. 2. 3. …	1. MOEW
Manuals	1.Pests of Fruit Trees in UAE 2. 3. …	1. 1998 2. 3. …	1.Books 2. 3. …	1. 2. 3. …
Guidelines	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Standard operating Procedures (SOPs)	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Advocacy Material (posters, pamphlets etc.)	1. A number of posters and pamphlets 2. 3. …	1. 2. 3. …	1. 2. 3. …	1. 2. 3. …
Other	1. Agricultural Exhibitions 2. 3. …	1. . Regularly 2. 3. …	1. Dissemination 2. 3. …	1. 2. 3. …

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP). *

[x] Yes. We can be contacted to share any or all of the resources listed.

[ ] No. I do not agree.

SOUTHWEST PACIFIC

FIJI

Country:	FIJI
Name of respondent:	Ilaisa Dakaica
Address:	1st Floor, Takayawa Building, Toorak PO Box 18360, Suva
Email:	idakaica@biosecurityfiji.com

Please list the technical resources that are available to the staff involved in pest surveillance:

Type	Title	Date of Publication	Description of technical resource	Author/Editor
Tools (e.g. software, diagnostic aids, etc.)	1. Pest trap 2. Camera 3. Nets 4. Specimen bottles 5. Inspection kits 6. Latex gloves 7. Diagnostic Insect pest book 8. Fruit fly lures …	1. 2. 3. 4. 5. 6. 7. 2008 …	1. Steiner traps 2. Olympus digital camera 3. Catch flying insects 4. Collect pests 5. Contains scalpels, forceps, probes, magnifying glass 6. Gloves 7. Diagnostic books produced by NZMAF 8. ME, CUE and Trimedlure …	1. 2. 3. …
Training materials	1. Quarantine pest illustrated handbook 2. Surveillance team work plan 3. Pest Advisory Leaflets 4. Brochures 5. Posters …	1. 2008 2. Jan 2012 3. …	1. Taxonomy of insect orders 2. Business Plan 2012 3. Information on economically important pests 4. Information on exotic target pests 5. Information on exotic target pests, identification and hosts …	1.NZMAF 2. BAF, PPS-KRS 3. …
Presentations	…			
Videos				
E-learning	1. Information on the internet 2. Pacific Pest List Database 3. Fiji Pest List database 4. PADIL …	1. 2. 3. …	1. Journals, communications, research 2. Pests and diseases of crops in the Pacific 3. Pest and disease list of crops in Fiji 4. Diagnostic tool on internet …	1. 2. SPC 3. BAF 4. AQIS …
Manuals	1. Insect Diagnostic Pest book 2. Insects of Australia Vol. I & II 3. …	1. June 2008 2. 2000 3. …	1. The identification of quarantine pests 2. Identification/taxonomy 3. …	1. NZMAF 2. DAFF 3. …
Guidelines	1.ISPM 5	1.	1. Glossary of terms	1. IPPC

	2.ISPM 6 3. …	2. 3. …	2. Pest Surveillance Guidelines 3. …	2.IPPC 3. …
Standard operating Procedures (SOPs)	1. Standard surveillance for Fruit Flies 2. Quarantine Surveillance in the Pacific 3. …	1. April 2009 2. 3. …	1. 2. 3. …	1. MPI 2. SPC 3. …
Advocacy Material (posters, pamphlets etc.)	1. Posters 2. Brochure 3. Leaflet 4. Specimen 5. Microscope …	1. March 2011 2. 3. …	1. Illustrations of quarantine pests 2. Illustrations of quarantine pests 3. Illustrations of quarantine pests 4. Specimen as example 5. Better view at diagnostic features …	1. BAF 2. BAF 3. BAF 4. BAF 5. BAF …
Other	1. Technical presentations 2. 3. …	1. 2008-2011 2. 3. …	1. Pests and Diseases 2. 3. …	1. BAF and KRS-PPS 2. 3. …

Indicate your willingness to make available the resources listed above to others in the phytosanitary community via the International Phytosanitary Portal (IPP). *

[√] Yes. We can be contacted to share any or all of the resources listed.

[ ] No. I do not agree.