The International Plant Protection Convention

The use of integrated measures in a systems approach for pest risk management (ISPM14) and the Beyond compliance tool

2017 IPPC Regional Workshop
Date, City, Country
Outline

- Achieving safe international trade
- ISPM14 - The use of integrated measures in a systems approach for pest risk management
- Beyond Compliance: a production chain framework for plant health risk management in trade
- A new project - Beyond Compliance Global: integrated systems approach for pest risk management
Achieving safe international trade

- Allow movement of goods and people
- Prevent the introduction and spread of pests
  - Harmonized justified phytosanitary measures
  - National phytosanitary capacities
Achieving safe international trade – ISPM 2 Framework for pest risk analysis

Scope

This standard provides a framework that describes the pest risk analysis (PRA) process within the scope of the IPPC. It introduces the three stages of pest risk analysis:

- **Stage 1 - Initiation**
- **Stage 2 - Pest risk assessment**
- **Stage 3 - Pest risk management**

The International Advisory Group on Pest Risk Analysis (IAGPRA) recognizes that the Pest Risk Management phase is often the weakest.
Achieving safe international trade - trade problems

- Lack of phytosanitary capacities to meet phytosanitary requirements of trading partners
- Lack of negotiation skills - asymmetry in negotiations
- Weak structures in place for liaison between exporting NPPOs and domestic producers on phytosanitary measures
- Weak structure for discussions on systems approach between import and export NPPOs
ISPM 14 - The use of integrated measures in a systems approach for pest risk management

Scope
Guidelines for the development and evaluation of integrated measures in a systems approach as an option for pest risk management under the relevant international standards for pest risk analysis (PRA) designed to meet phytosanitary import requirements for plants, plant products and other regulated articles.
ISPM14 - The use of integrated measures in a systems approach for pest risk management

Purpose:

- Provide an equivalent alternative to procedures/single measures such as treatments or replace more restrictive measures;

  OR

- Develop integrated measures when no single measure is available
ISPM14 - The use of integrated measures in a systems approach for pest risk management

Systems approach:
- May be composed of independent and dependent measures
- Must have at least two independent measures acting independently, with a cumulative effect
- An independent measure may be composed of several dependent measures.
- Simple combination of independent measures
- Critical control point systems
Systems approach

Challenges

- Describing a system
  - Pest and control models implied in chain
  - Equivalence of measures in a system
- Organising a system
- Maintaining high quality products along the whole system
- Negotiating a system
- Running a system
Beyond Compliance Global: integrated systems approach for pest risk management

Background information - Beyond Compliance: a production chain framework for plant health risk management in trade (first project):

- Confidence and competence to use Systems Approach in trade access in SE Asia
  - Arose out of EC PRATIQUE project
  - Funded by STDF/WTO
- Recognises complex issues of Systems Approach
  - Builds on PRATIQUE Decision Support System (DSS) for Risk Management
- Creates tools to describe systems, obtains efficacy assessments and model quantified combined measures
Beyond Compliance Global: integrated systems approach for pest risk management

Beyond Compliance approach - Five steps

I. PRA links from assessment to management
   ▪ Often poor connection in PRA

II. Stakeholder interaction frameworks
    ▪ Practice, Options and Performance

III. Production chains

IV. Decision Support System: Risk Management

V. Probabilistic modelling at Control Points
Beyond Compliance tools - Production Chain

Separate columns:
- Time/place/stage in chain
- Objective of the measure
- Measures
- Verification

Colour coding:
- Official or commercial measures
- Currently applied or potential
- In line with least restrictive, or to be discussed for removal
- For risk reduction or verification
Beyond Compliance tools - Production Chain

**Objective:**
- Suppress pest populations in the field
- Monitoring of pest populations
- Reducing population of pests (e.g., FF and mealybugs) and reducing infestation pressure

**Measures:**
- Treatment of planting materials against mealybug (for new plantations only)
- Field sanitation at the start of crop season
- Pruning and tree structure
- Pest surveillance
- Protein bait
- Insecticide cover spray

**Production Chain:**
- Painting and preparation

**Verification:**
- Farm records of work done
- Farm records and NPPO surveillance report

**Key:**
- Currently used and consistent with ISPM 14
- The measure is consistent with ISPM 14 but not applying in practice
- Control Point
- Recommended measure by FF expert
- Currently used under the request of the importing country but is not consistent with ISPM 14
## Beyond Compliance tools – Decision Support System

### Efficacy and Implementation

- **Systematic evaluation for all measures on common scales**

### Table C1: Description of candidate measures (these may be used alone or with other measures)

<table>
<thead>
<tr>
<th>Measure Description</th>
<th>Risk Management</th>
<th>Graphic</th>
<th>Is the measure realistic?</th>
<th>Is it economically viable?</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 a) Uncertainty</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>1.1 b) The measure can be...</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>1.2 a) The measure can be...</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>1.3 a) The measure can be...</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>1.4 a) The measure can be...</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>1.5 a) The measure can be...</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>1.6 a) The measure can be...</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>1.7 a) The measure can be...</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>1.8 a) The measure can be...</td>
<td>Low</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>

### References

- **Beyond Compliance tools – Decision Support System**
- **Efficacy and Implementation**
- **Systematic evaluation for all measures on common scales**

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**Table C1**: Description of candidate measures (these may be used alone or with other measures)
### Risk management measures available

<table>
<thead>
<tr>
<th>Measure</th>
<th>Efficacy</th>
<th>Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Avoid cultivating host plants of <em>Thrips palmi</em> around planting area</td>
<td>Medium</td>
<td>With some difficulty</td>
</tr>
<tr>
<td>2.3 Farm layout and building</td>
<td>Low</td>
<td>Difficult</td>
</tr>
<tr>
<td>2.4 Dipping of stem cuttings against <em>Thrips palmi</em></td>
<td>High</td>
<td>Very easy</td>
</tr>
</tbody>
</table>

- **Efficacy**
  - YH: High
  - M: Medium
  - L: Low
  - VL: Very low

- **Verification**
  - VE: Very easy
  - E: Easy
  - D: Difficult
  - VD: Very difficult
Beyond Compliance tools – Decision Support System

Efficacy and Implementation from stakeholder/expert elicitation

<table>
<thead>
<tr>
<th>Eff</th>
<th>Unc</th>
<th>Imp</th>
<th>Unc</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Low</td>
<td>Easy</td>
<td>Low</td>
</tr>
</tbody>
</table>

4.7 Protein bait

- **Eff**: High, Low
- **Unc**: Imp, Unc
Beyond Compliance tools - Control Point Probabilistic Production Chain

Field measures, with pest monitoring

Harvest sorting and hygiene

Inspection and sorting at packing
Beyond Compliance tools - Control point Probabilistic Production Chain

3.1 Field sanitation at the start of season

Control Point 1

Infestation established by Pest surveillance

4.6 Protein bait
4.7 Insecticide cover sprays
5.2 Fruit bagging

Infestation at the end of previous season

- Negligible 26%
- Low 70%
- High 4%

Infestation updated

- Negligible 26%
- Low 70%
- High 4%

Infestation at farm at end of growing season

- Negligible 98%
- Low 2%
- High 0%

Reinfestation during growing season

- Negligible 100%
- Low 0%
- High 0%

Control point 1
Field measures, with monitoring
Beyond Compliance: a production chain framework for plant health risk management in trade

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Exporting country</th>
<th>Target importing country/region</th>
<th>Type of case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dragon fruit</td>
<td>Vietnam</td>
<td>South Korea, Taiwan</td>
<td>Proposed equivalence</td>
</tr>
<tr>
<td>Jackfruit</td>
<td>Malaysia</td>
<td>Australia, China</td>
<td>New trade</td>
</tr>
<tr>
<td>Banana</td>
<td>Philippines</td>
<td>USA</td>
<td>More measures than needed</td>
</tr>
<tr>
<td>Orchid cut flowers</td>
<td>Thailand</td>
<td>Europe</td>
<td>Existing measures not working, possible ban</td>
</tr>
<tr>
<td>Additional case</td>
<td></td>
<td></td>
<td>Due to the upcoming loss of dimethoate pesticide</td>
</tr>
<tr>
<td>with other funding:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomatoes</td>
<td>Australia</td>
<td>Both domestic and international markets</td>
<td></td>
</tr>
</tbody>
</table>
Beyond Compliance Global: integrated systems approach for pest risk management

The global project aims:
- To disseminate approach and tools further
- To embed expertise in each region
- To accomplish a few more cases
  - From existing export to new markets, or equivalent management measures
  - Cases of new trade
- Translation of materials or book for use towards the above
Beyond Compliance Global: integrated systems approach for pest risk management

Partner selection:
- Criteria for new cases is drafted but would rely on an advisory group, with IPPC Secretariat
- NPPOs, RPPOs or similar bodies could apply
- A range of example cases, representative of regions, would be selected
- Experts to be trained in each region also to be selected in conjunction with the above advisors
Beyond Compliance Global: integrated systems approach for pest risk management

Benefits for NPPOs/ Contracting parties:

- Strengthened national capacities for PRA
- Improved decision making in the pest risk management phase
- Strengthened negotiation skills
- Dispute avoidance
- Gain market access
- Support national and regional objectives to reduce pesticide use and employ integrated pest (IPM) practices
Beyond Compliance Global: integrated systems approach for pest risk management

How to participate:

- IPPC will announce a call for interested parties/partners to apply to participate in the project
- Interested parties/partners can begin discussions in advance to consider potential trade cases

Your participation is welcome!
More information on Beyond Compliance at http://www.standardsfacility.org/PG-328
Contacts

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