

- **By Philip Njoroge**

SEMIS - UON

Contents

1. Role Of Phytosanitary Seed Quality Regulations On The Seed Value Chains
2. Rationale For Making Phytosanitary Decisions

ROLE OF PHYTOSANITARY SEED QUALITY REGULATIONS ON THE SEED VALUE CHAINS

Philip Njoroge

E-mail: pknjoroge@kephis.org

14th September, 2015



Phytosanitary Import Regulations

- ▶ Describes the structure and operation of a Phytosanitary import regulatory system and the rights, obligations and responsibilities which should be considered in establishing, operating and revising the system.



Phytosanitary Import Regulations

- ▶ Based on **ISPM No. 20**-*guidelines for a phytosanitary import regulatory system.*
- ▶ Makes reference to the following ISPMS:
- ▶ **23** (*guidelines for inspection*)
- ▶ **12**(*Guidelines for phytosanitary certificates*),
13(*guidelines for the notification of non-compliance and emergency action*)
- ▶ **25**(*consignments in transit*)
- ▶ **31** (**Methodologies for sampling of Consignments**)



Import regulation –2

- ▶ The objective of a Phytosanitary import regulatory system is to prevent the introduction of quarantine pests or limit the entry of regulated non-quarantine pests (RNQPs) with imported commodities and other regulated articles.
- ▶ **Rights, Obligations and Responsibilities**
- ▶ In establishing and operating its import regulatory system, the NPPOs should take into account:
 - rights, obligations and responsibilities arising from relevant international treaties, conventions or agreements and relevant international standards
 - national legislation and policies
 - administrative policies of the government, ministry or department, or NPPO.



Import Regulatory System-3

- ▶ The NPPO is responsible for the operation and/or oversight of the import regulatory system .. Article IV.2 of the IPPC
- ▶ The NPPO should have a **management system** and **resources** adequate to carry out its functions.
- ▶ The administration of the import regulatory system should ensure the **effective and consistent** application of phytosanitary legislation and compliance with international obligations



Phytosanitary measures

- ▶ Any legislation, regulation or official procedure having the purpose **to prevent the introduction or spread of quarantine pests**
- ▶ Include plant import procedures and phytosanitary certification
- ▶ **Purpose**
- ▶ Preventing the introduction of harmful foreign pests, diseases and weeds



Why bother regulating trade?

- Increased movement of plants and regulated articles posing risk of introduction of pests, diseases and noxious weeds . If well managed importation assures:
 - **expanded global economy**
 - **Exchange of food and other products from places with overproduction to places of scarcity**



KEPHIS

- Kenya's NPPO
- A state corporation under M.o.A, L &F.
- Established under the State Corporations Act (Cap 446)
- Commenced operation in Nov. 1997
- Regulates agricultural sector through the application/enforcement of SPS measures



The National Set-Up of NPPO, Kenya in compliance with Art IV of IPPC

- a) Regulating on all matters relating to plant protection, seeds and plant varieties;
- (b) administration and enforcement of sanitary and phytosanitary measures;
- (c) supporting the administration and enforcement of food safety measures;
- (d) Service laboratories for to monitoring quality and levels of toxic residues in agro-inputs, irrigation water, plants, soils and produce;



NPPO–Kenya– Art IV of IPPC (2)

- e) a principal advisor to the Government on issues relating to seeds and planting material;
- f) plant variety protection in Kenya, administration of plant breeders' rights and maintenance of Plant Breeders' Rights Register;
- g) plant variety testing and description, seed certification and plant quarantine control



NPPO–Kenya– Art IV of IPPC (3)

- (i) inspection and grading of plants and plant produce at the ports of entry and exit;
- (j) In consultation with other relevant agencies, develop and implement standards for seed and plant materials;
- (k) implementation and enforcement of national bio–safety regulations on the introduction and use of genetically or living modified species of plants, insects and micro–organisms, plant products and other related species



NPPO–Kenya– Art IV of IPPC (4)

- l) regulating the import and export of plants and plant materials;
- (m) in consultation with other relevant agencies, undertakes regulation of the commercial exploitation of naturally occurring plants and plant–related micro– organisms



Enabling laws in seed trade

The seeds and plant varieties act (Cap 326)

- ▶ An Act of Parliament to confer power to:-
- ▶ Regulate transactions in seeds, including provision for the testing and certification of seeds
- ▶ For the establishment of an index of names of Plant Varieties
- ▶ To empower the imposition of restriction on the introduction of new varieties
- ▶ To control the importation of seeds



Enabling laws in seed trade

1. The Plant Protection Act (Cap 324) – encompasses rules for prevention of introduction and spread of pests and diseases destructive to plants.
2. The Agricultural Produce (Export) Act (Cap 319)
3. Crops Act, 2012
4. Seeds and Plant Varieties Act, Cap 326



Issuance of import permits

- ▶ Prior to issuance of import permits risk analysis is done (source of information for PIO, PRA reports, PRA information from other NPPOs).
- ▶ Depending on risk identified the material is either:
 - a. Prohibited
 - b. Allowed under quarantine conditions
 - c. Allowed under normal permit -risk is low but exporting country must meet some conditions like pre-shipment treatment



Issuance of import permits– A requirement of Cap 324

▶ **Plant Import Regulations**

▶ In 3 categories

- Imports that are permitted
- Imports under quarantine
- Imports that are prohibited

▶ **Imports that are permitted**

- ▶ Carry low risk of pest introduction i.e risk is low but exporting country must meet some conditions like pre-shipment treatment
- ▶ Only from specific parts of the world
- ▶ Require phytosanitary certification



Issuance of import permits cont...

- ▶ **Imports under quarantine**
Importation carries risk of introducing dangerous organisms i.e. risk is high but can be mitigated
- ▶ Plants symptom-less carriers of pathogens; plants appear healthy
- ▶ Plants grown at quarantine station for a period of time before release to importer
- ▶ Open quarantine arrangements
- ▶ E.g. vegetative propagation material of Vanilla, *Zantedeschia spp.*



Issuance of import permits cont...

- ▶ **Imports that are prohibited**
- ▶ Importation carries very high risk of pest introduction and the NPPO cant manage adequately
- ▶ Importation not allowed under any circumstances
- ▶ E.g. timber with bark, Christmas trees, fruits from India, aquatic plants

There should be adequate laboratory capacity to confirm that quarantine pests are not introduced and that those held in quarantine are eliminated through laboratory confirmation



Seed Importation and Exportation

REQUIREMENTS

- **In order to import or export seed into Kenya one must:-**
 1. Be a **registered** seed merchant.
 2. Notice to import/export seed by filling form **SR 14** provided by KEPHIS.
 3. Obtain a **Plant Import Permit** (PIP) from KEPHIS on which the conditions to be met by the exporting country are specified.
 4. Obtain a **Phytosanitary Certificate** from the corresponding Seed Certifying body in the country of origin for import addressing the conditions specified in the PIP.



Seed Importation and Exportation cont...

5. Obtain an international orange (**ISTA**) certificate from the official seed tester (KEPHIS) for exports or the seed certifying body in the country of origin for imports. This will accompany the seeds.
6. **Seed to be inspected** by KEPHIS at the port of exit/entry, sampled & verification tests done, before sale- imports
 - ▶ All plant materials must be declared at point of entry



Seed Importation and Exportation cont...

- ▶ Upon the arrival of the consignment the documents are **verified**. If they are compliant the consignment is inspected
- ▶ The inspector takes a sample and inspects against presence **of insect pests, moisture content for grains and diseases**.
- ▶ The consignment is then **released** to the importer if complies.
- ▶ **Prohibited/non compliant material are destroyed or shipped back**



ISTA Certificates

ISTA
ORGANISATION INTERNATIONALE SEED LOT CERTIFICATE
BULLETIN INTERNATIONAL ORGANISATION DE LOT DE SEMENCES
INTERNATIONALE ORGANISATION BERICHT UBER EINE SAATGUTPARTIE

STATES BY APPLICANT - INFORMATIONS DU REGULARANT - ANGABEN DES ANTRAGSTELLERS

Number of applicant
Nom du régularant
Nom des demandeurs

Species, cultivar, category, weight of lot etc.
Espèces, cultivars, catégories, poids de lot etc.
Art, variété, catégorie, quantité des échantillons

Origin and issuing laboratory
L'origine et le laboratoire qui délivre le certificat
L'origine et le laboratoire qui délivre le certificat

Number of countries
Nombre de pays
Nombre de pays

ANALYSIS BY

SPICES, 20002 - 497 (continued from page 1)

PLANT PLANT

Plant name	Year	Other marks
Species	Year	Other marks
Cultivar	Year	Other marks
Category	Year	Other marks
Weight	Year	Other marks

Other marks: (continued from page 1)

OTHER DETERMINATIONS - AUTRES DETERMINATIONS

Other marks: (continued from page 1)

OTHER DETERMINATIONS - AUTRES DETERMINATIONS

Other marks: (continued from page 1)

ISTA Reg. No. 00782840
Reg.-Nr. 00782840

ISTA Reg. No. 00782840
Reg.-Nr. 00782840

ISTA
ORGANISATION INTERNATIONALE SEED LOT CERTIFICATE
BULLETIN INTERNATIONAL ORGANISATION DE LOT DE SEMENCES
INTERNATIONALE ORGANISATION BERICHT UBER EINE SAATGUTPARTIE

STATES BY APPLICANT - INFORMATIONS DU REGULARANT - ANGABEN DES ANTRAGSTELLERS

Number of applicant
Nom du régularant
Nom des demandeurs

Species, cultivar, category, weight of lot etc.
Espèces, cultivars, catégories, poids de lot etc.
Art, variété, catégorie, quantité des échantillons

Origin and issuing laboratory
L'origine et le laboratoire qui délivre le certificat
L'origine et le laboratoire qui délivre le certificat

Number of countries
Nombre de pays
Nombre de pays

ANALYSIS RESULTS - RÉSULTATS DE L'ANALYSE - CONTRÔLES INDICATIVES

SPICES, 20002 - 497 (continued from page 1)

Plant name	Year	Other marks	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)	Germination (%)
Species	Year	Other marks																		
Cultivar	Year	Other marks																		
Category	Year	Other marks																		
Weight	Year	Other marks																		

Other marks: (continued from page 1)

OTHER DETERMINATIONS - AUTRES DETERMINATIONS

Other marks: (continued from page 1)

OTHER DETERMINATIONS - AUTRES DETERMINATIONS

Other marks: (continued from page 1)

SEED

SPECIMEN

Seed Importation and Exportation cont...

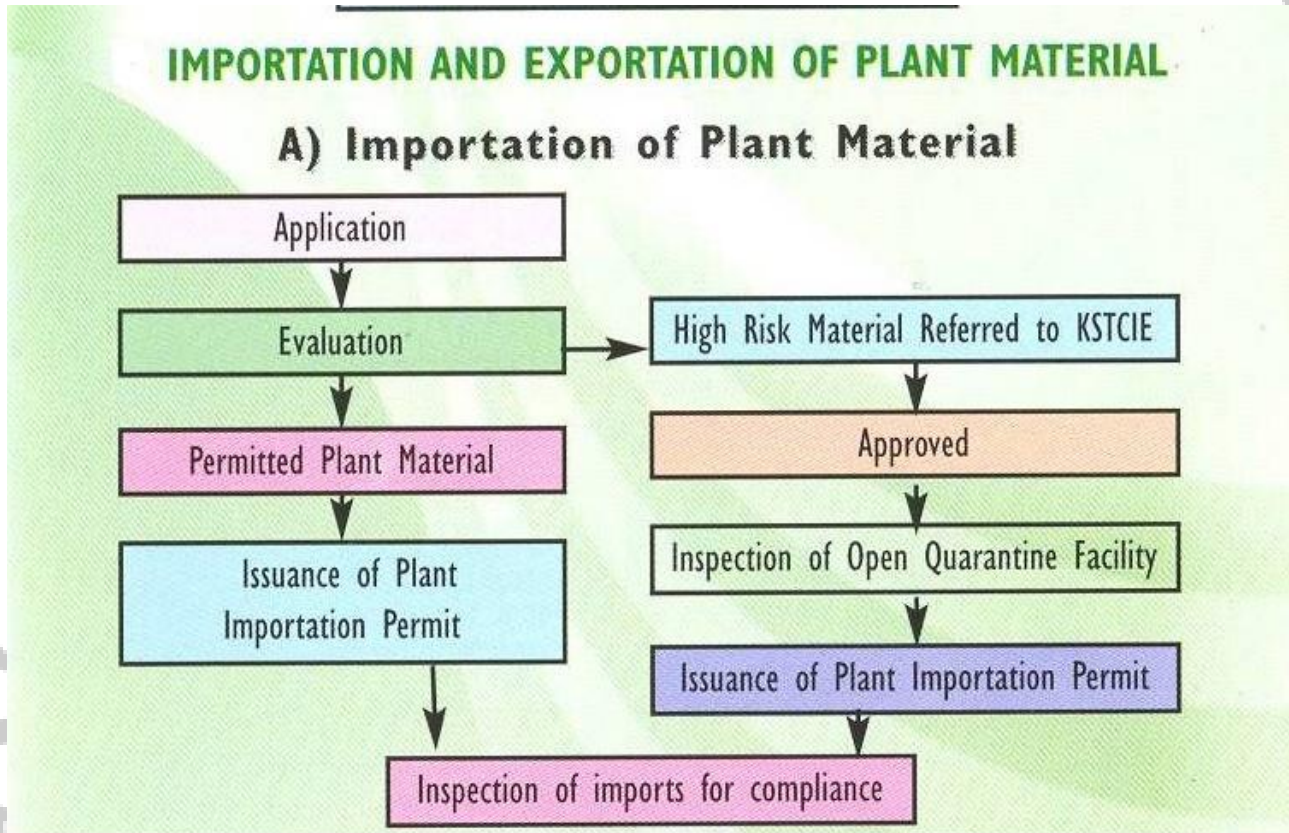
- ▶ **Note:** Research and educational institutions, and other organizations can import seed on trial/experimental basis.

The conditions are that:

- There are limits on the amount (weight) of seed to be imported
- The seed shall not be distributed for commercial purposes



Illustration on Procedure for Importation of Plant Material



Guiding Principles in Export Certification

- ▶ Covered in ISPM No. 7, also ref ISPM No. 12

Describes:

- the components of a national system for the issuance of phytosanitary certificates (also ref ISPM No. 12)
- an export certification system to produce valid and credible phytosanitary certificates (PCs).



Basic elements of Phytosanitary export certification process include:

1. Ascertaining the relevant Phytosanitary requirements of the importing country.
Grower/Exporter must familiarize themselves with these requirements before they start growing.
2. Verify the consignment conforms to those requirements at the time of certification
3. Issuing of a Phytosanitary certificate.



Additional information

- ▶ Avail import conditions of destination country
- ▶ Under Cap 319, Plant materials inspected at exit point for:
 - Pests and diseases
 - Chemical residues
 - Quality, grading, packaging.
- ▶ Field inspections and Phytosanitary certification
- ▶ Phytosanitary certificate issued
- ▶ For materials regulated under **CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)** appropriate authority is required from CITES office at KWS



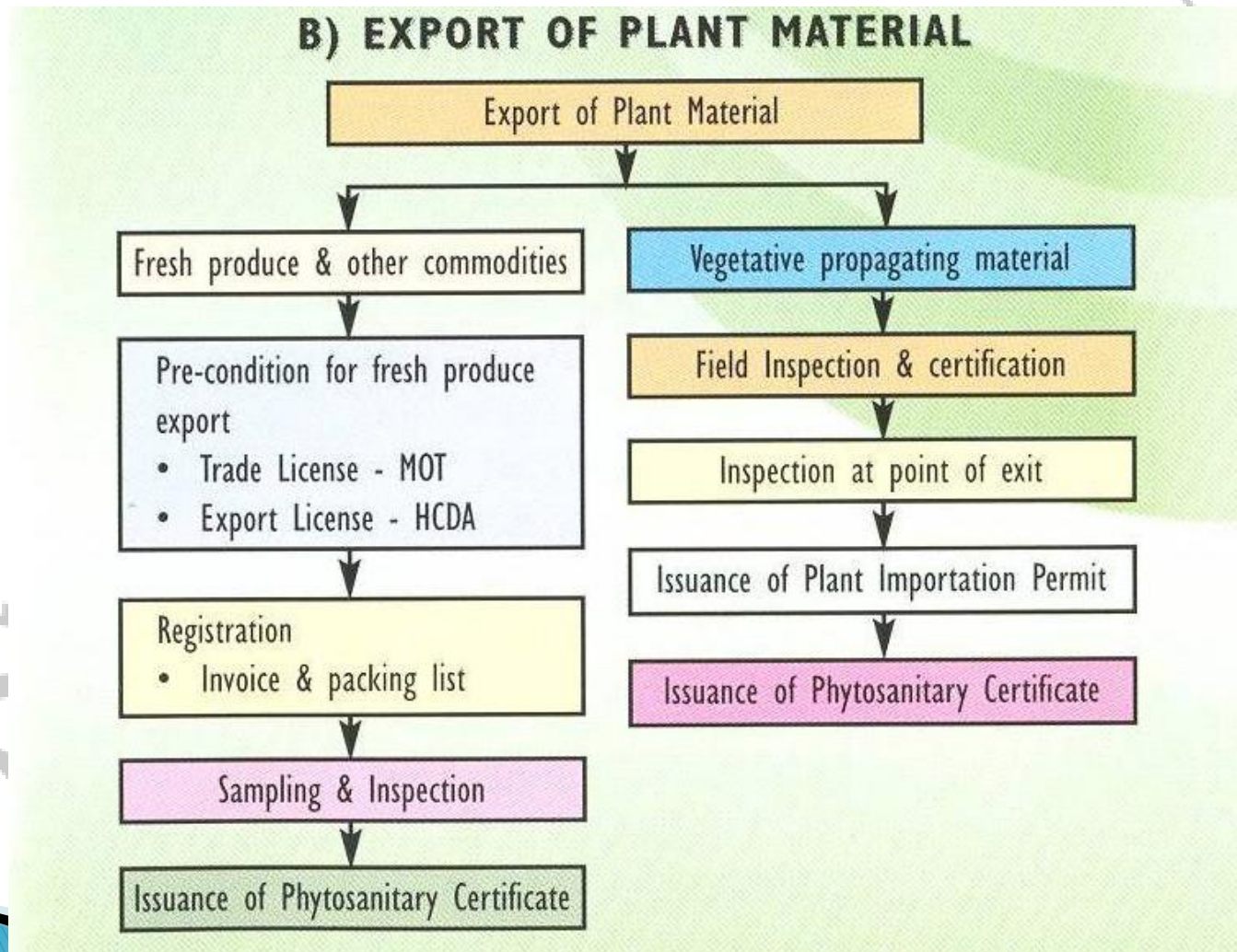
National restrictions and prohibitions (Art. VII 2b of the IPPC);

These are contained in the Plant Protection Act
http://www.kephis.org/index.php/downloads-documents/doc_download/1-the-plant-protection-act-cap-324.

Additional information available
<http://www.kephis.org/index.php/import-requirements>



Illustration on Procedure of export of plant materials



Inspection procedures

- ▶ Inspection procedures are described in [ISPM No. 23](#)
- ▶ It is focused on the determination of compliance with Phytosanitary requirements, based on [visual examination, documentary checks, and identity and integrity checks](#)
- ▶ NPPOs have the responsibility for “the inspection of consignments of plants and plant products moving in international traffic and, where appropriate, the inspection of other regulated articles, particularly with the object of preventing the introduction and/or spread of pests.” ([Article IV.2c of the IPPC, 1997](#))



Inspection procedure cont...

- ▶ Presentation of documents by the importer or agent
- ▶ Examination of documents associated with a consignment
- ▶ Verification of consignment identity and integrity
- ▶ Visual examination–use of inspection tool kit contains:
 - Inspection Knife, sampling bags, vials, hand lens, notebook, pen/pencil labels(adhesive labels) and alcohol(70%)
 - ▶ Pest/disease identification(not mandatory if visual examination was adequate)
 - ▶ Decision making



Inspection of export produce



Inspection for:

- pests and diseases
- Chemical residues
- Quality
- grading
- packaging

Inspection of import maize grain in a ship



Inspection outcome

- ▶ The result of the inspection contributes to the decision to be made as to whether the consignment meets phytosanitary requirements
- ▶ If phytosanitary requirements are met, consignments for imports may be allowed entry.
- ▶ If phytosanitary requirements are not met, further actions can be taken. These actions may be determined by the nature of the findings, considering the regulated pest or other inspection objectives, and the circumstances.
- ▶ Actions for noncompliance are described in detail in ISPM No. 20 (*Guidelines for a phytosanitary import regulatory system*), section 5.1.6.



Decision making

- ▶ This is based on principles of ISPM No. 13– *guidelines for the notification of non-compliance and emergency action*
- ▶ Provisions of the IPPC Related to Notification:
 - ▶ **Art VII.2f**– Importing country to notify exporting the country of non-compliance as soon as possible
 - ▶ **Art VII.6**– Contracting parties to take appropriate emergency action upon detection of a pest posing threat and communicate to the other party

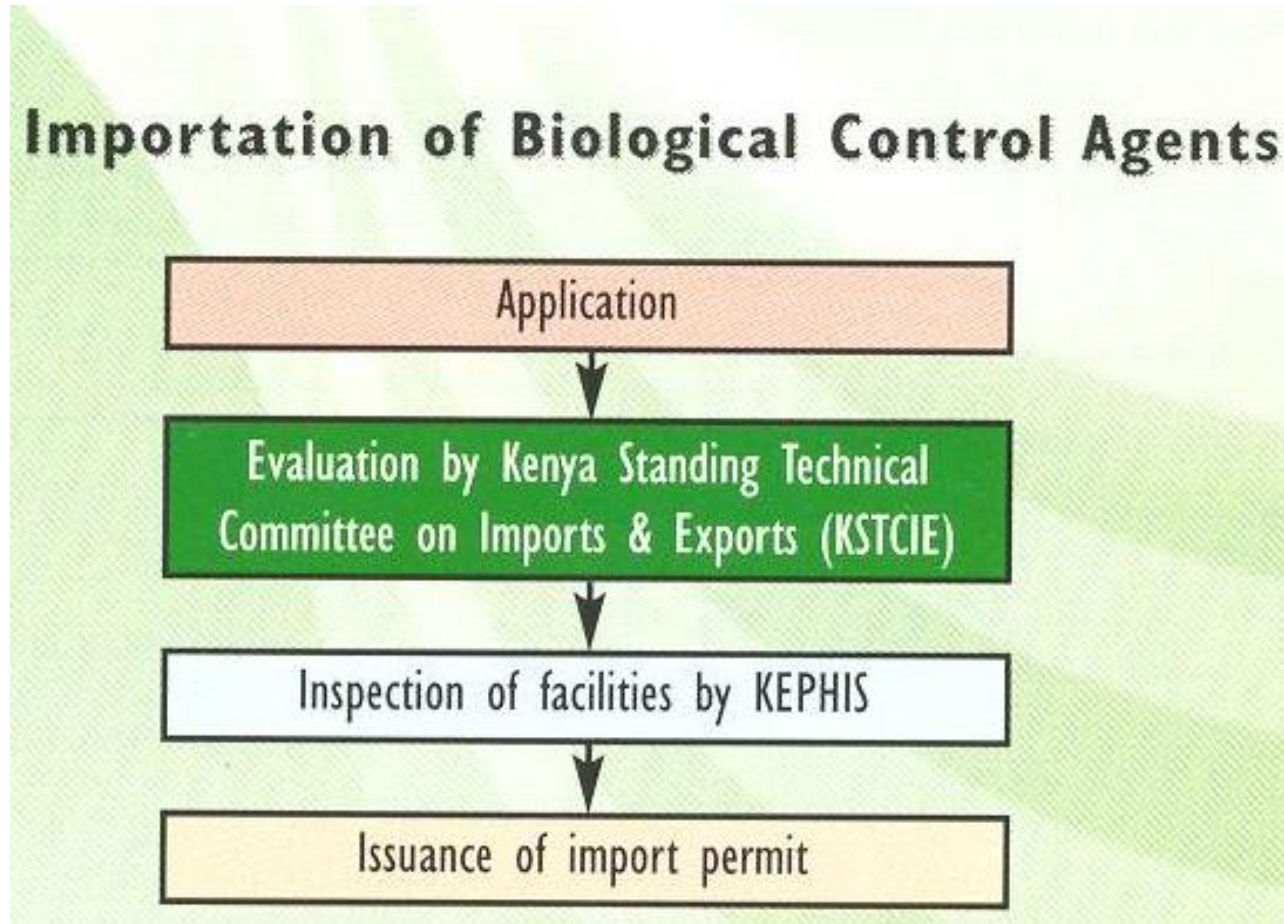


Biological Control Agents

- ▶ Importation approved by the Kenya Standing Technical Committee for Imports and Exports (KSTCIE)
- ▶ KEPHIS inspects containment facilities for the BCA to ensure compliance to import conditions
- ▶ Biological Import Permit issued
- ▶ Examples *Trichogramma spp.*, *Cotesia flavipes*



Illustration on Procedure for Importation of Bio-control Agents



Laboratory capacity



**COMESA Referral Laboratory at the Plant Quarantine and Biosecurity Station
Fitted with modern equipment and capacity for:**

- Real time PCR
- Conventional PCR
- ELISA
- Biochemical methods

Laboratory capacity



Laboratory Complex at KEPHIS Headquarters housing:

- **Molecular laboratory (Realtime PCR, Conventional PCR, ELISA, Rapid Kits)**
- **Plant Health Laboratory**
- **Food microbiology laboratory**
- **Analytical Chemistry Laboratory**

Conclusion and way forward

- ❑ Phytosanitary measures exist to prevent pest introductions and spread, thus facilitate trade
- ❑ Challenge of preventing movement of pests without affecting trade/movement of germplasm
- ❑ Require cooperation of governments, agencies, research institutions, industry, citizens

Contact details

Contact details

KEPHIS

P.O. Box 49592-00100, Nairobi, Kenya

Tel.: +254-20-3536171/2

Fax: + 254-20-3536175

Email: info@kephis.org

Website: www.kephis.org



Rationale for making phytosanitary decisions

Philip Njoroge

E-mail: pknjoroge@kephis.org

14th September, 2015

Basis

- The Basis for decision making are: WTO SPS Agreement, ISPMs (International Phytosanitary measures) and PRA.
- Countries have their Plant protection laws. These Need to be revised to accommodate best international best practice to avoid being a protectionist measure, but rather allow achievement of Plant protection (ALOP principle)

Approved ISPMS

- To date there are 36 ISPMS and Countries / RECS need to use the applicable ISPMS.
- List of ISPMS include:

ISPMS 01	<u>Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade</u>	<u>Fr,Es,Ar, Zh,En Zh,Ar,Es, Fr</u>	15-12-2011
ISPMS 02	<u>Framework for pest risk analysis</u>	<u>Fr,Es,Ar,Zh,En Fr,Es,Zh,Ar</u>	15-12-2011

Approved ISPMS-2

ISPM 03	<u>Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms</u>	<u>Fr,Ar,Zh,Es,En</u> <u>Zh,Fr,Es</u>	15-12-2011
ISPM 04	<u>Requirements for the establishment of pest free areas</u>	<u>Ar,Es,FrZ</u> <u>h,En</u> <u>Zh,Es,Fr,</u> <u>Ar</u>	15-12-2011
ISPM 05	<u>Online version of the Glossary of phytosanitary terms- all languages</u>	<u>Ot</u>	10-05-2010

Approved ISPMS-3

ISPM 06	<u>Guidelines for surveillance</u>	<u>Ar,Fr,Es,En</u> <u>Zh,Zh,Ar</u> <u>Fr,Es</u>	15-12-2011
ISPM 07	<u>Phytosanitary certification system</u>	<u>Zh,Ar,En</u> <u>Fr,Es,Ru</u> <u>Zh,Ar</u>	17-07-2012
ISPM 08	<u>Determination of pest status in an area</u>	<u>Ar,Fr,Es,Zh</u> <u>h,En</u> <u>Zh,Ar,Fr,Es</u> <u>s</u>	15-12-2011

Approved ISPMS-4

<p>ISPM 09</p>	<p><u>Guidelines for pest eradication programmes</u></p>	<p><u>Ar,Es,Fr</u> <u>,Zh,En</u> <u>Zh,Es,A</u> <u>r,Fr</u></p>	<p>15-12- 2011</p>
<p>ISPM 10</p>	<p><u>Requirements for the establishment of pest free places of production and pest free production sites</u></p>	<p><u>Fr,Zh,Ar</u> <u>,Es,En</u> <u>Ar,Zh,Fr</u> <u>,Es</u></p>	<p>15-12- 2011</p>

Approved ISPMs-5

ISPM 11	<u>Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms</u>	<u>Fr,Ar,Zh,En</u> <u>Zh,Es,Ar,Fr,En</u>	15-12-2011
ISPM 12	<u>Phytosanitary certificates</u>	<u>Zh,Ar,En,Fr,Es,Ru</u>	17-07-2012
ISPM 13	<u>Guidelines for the notification of non-compliance and emergency action</u>	<u>Ar,Fr,Zh,Es,En</u> <u>Zh,Fr,Es</u> <u>Ar</u>	15-12-2011

Approved ISPMS-6

ISPM 14	<u>The use of integrated measures in a systems approach for pest risk management</u>	<u>Ar,Fr,Zh</u> <u>,Es,En</u> <u>Zh,Fr,Ar</u> <u>,Es</u>	15-12-2011
ISPM 15	<u>Regulation of wood packaging material in international trade</u>	<u>Fr,Es,Zh</u> <u>,En</u> <u>Fr,Es,Zh</u> <u>,Ar</u>	15-12-2011
ISPM 16	<u>Regulated non-quarantine pests: concept and application</u>	<u>Ar,Fr,Es,</u> <u>Zh,En</u> <u>Zh,Ar,Fr</u> <u>,Es</u>	15-12-2011

Approved ISPMs-7

ISPM 17	<u>Pest reporting</u>	<u>Ar,Es,Fr</u> <u>,Zh,En</u> <u>Zh,Ar,Fr</u> <u>,Es</u>	15-12- 2011
ISPM 18	<u>Guidelines for the use of irradiation as a phytosanitary measure</u>	<u>Ar,Fr,Es,</u> <u>Zh,En</u> <u>Zh,Es,Fr</u> <u>,Ar</u>	15-12- 2011
ISPM 19	<u>Guidelines on lists of regulated pests</u>	<u>Ar,Es,Fr,</u> <u>Zh,En</u> <u>Zh,Ar,Fr</u> <u>,Es</u>	15-12- 2011

Approved ISPMS-8

ISPM 20	<u>Guidelines for a phytosanitary import regulatory system</u>	<u>Es,Fr,Ar,Zh,En</u> <u>Zh,Es,Fr</u>	15-12-2011
ISPM 21	<u>Pest risk analysis for regulated non quarantine pests</u>	<u>Fr,Es,Ar,Zh,En</u> <u>Zh,Fr,Es</u>	15-12-2011
ISPM 22	<u>Requirements for the establishment of areas of low pest prevalence</u>	<u>Fr,Ar,Zh,Es,En</u> <u>Zh,Fr,Es</u>	15-12-2011

Approved ISPMs-9

ISPM 23	<u>Guidelines for inspection</u>	<u>Fr,Es,Ar</u> <u>,Zh,En</u> <u>Zh,Fr,Es</u>	15-12- 2011
ISPM 24	<u>Guidelines for the determination and recognition of equivalence of phytosanitary measures</u>	<u>Fr,Es,Ar</u> <u>Zh,En</u> <u>Zh,Es,Fr</u>	15-12- 2011
ISPM 25	<u>Consignments in transit</u>	<u>Fr,Es,Ar</u> <u>Zh,En</u> <u>Zh,Ar,Fr</u> <u>,Es</u>	15-12- 2011

Approved ISPMS-10

ISPM 26	<u>Establishment of pest free areas for fruit flies (Tephritidae)</u>	<u>Zh,Ar,En,Fr,Es,Ru</u> <u>Ar</u>	29-05-2012
ISPM 27	<u>Diagnostic protocols for regulated pests</u>	<u>Zh,En,A</u> <u>r,Es,Fr</u>	28-08-2012
ISPM 27 Annex 01	<u>DP 1 (2010): Thrips palmi Karny</u>	<u>Fr,Es,Ar,</u> <u>Zh,En</u>	15-12-2011

Approved ISPMS-11

ISPM 27 Annex 02	<u>DP 2 (2012): Plum pox virus</u>	<u>En,Fr,Es,</u> <u>Ar,Zh,Ru</u>	17-07- 2012
ISPM 27 Annex 03	<u>DP 3 (2012): Trogoderma granarium Everts</u>	<u>En,Ar,E</u> <u>s,Fr,Zh,</u> <u>Ru</u>	17-07- 2012
ISPM 28	<u>Phytosanitary treatments for regulated pests</u>	<u>En,Fr,Es</u> <u>,Ar,Zh</u>	15-12- 2011

Approved ISPMS-12

ISPM 28 Annex 01	<u>PT 1 (2009): Irradiation treatment for Anastrepha ludens</u>	<u>En,Fr,Es,</u> <u>Ar,Zh</u>	15-12- 2011
ISPM 28 Annex 02	<u>PT 2 (2009): Irradiation treatment for Anastrepha obliqua</u>	<u>En,Fr,Es</u> <u>,Ar,Zh</u>	15-12- 2011
ISPM 28 Annex 03	<u>PT 3 (2009): Irradiation treatment for Anastrepha serpentin</u>	<u>En,Fr,Es</u> <u>,Ar,Zh</u>	15-12- 2011

Approved ISPMS-13

ISPM 28 Annex 04	<u>PT 4 (2009): Irradiation treatment for Bactrocera jarvisi</u>	<u>En,Fr,Es</u> <u>,Ar,Zh</u>	15-12- 2011
ISPM 28 Annex 05	<u>PT 5 (2009): Irradiation treatment for Bactrocera tryoni</u>	<u>En,Fr,Es</u> <u>,Ar,Zh</u>	15-12- 2011
ISPM 28 Annex 06	<u>PT 6 (2009): Irradiation treatment for Cydia pomonella</u>	<u>En,Fr,Es</u> <u>,Ar,Zh</u>	15-12- 2011

Approved ISPMS-14

ISPM 28 Annex 07	<u>PT 7 (2009): Irradiation treatment for fruit flies of the family Tephritidae (generic)</u>	<u>En,Fr,Es,Ar,Zh</u>	15-12-2011
ISPM 28 Annex 08	<u>PT 8 (2009): Irradiation treatment for Rhagoletis pomonella</u>	<u>En,Fr,Es,Ar,Zh</u>	15-12-2011
ISPM 28 Annex 09	<u>PT 9 (2010): Irradiation treatment for Conotrachelus nenuphar</u>	<u>En,Fr,Es,Ar,Zh</u>	15-12-2011

Approved ISPMS-15

ISPM 28 Annex 10	<u>PT 10 (2010): Irradiation treatment for Grapholita molesta</u>	<u>En,Fr,Es</u> <u>,Ar,Zh</u>	15-12- 2011
ISPM 28 Annex 11	<u>PT 11 (2010): Irradiation treatment for Grapholita molesta under hypoxia</u>	<u>En,Fr,Es</u> <u>,Ar,Zh</u>	15-12- 2011
ISPM 28 Annex 12	<u>PT 12 (2011): Irradiation treatment for Cylas formicarius elegantulus (2011)</u>	<u>En,Ar,Z</u> <u>h,Fr,Es,</u> <u>Ru</u>	17-07- 2012

Approved ISPMS-16

<p>ISPM 28 Annex 13</p>	<p><u>PT 13 (2011): Irradiation treatment for Euscepes postfasciatus (2011)</u></p>	<p><u>En,Ar,Zh,</u> <u>Fr,Es,Ru</u></p>	<p>17-07- 2012</p>
<p>ISPM 28 Annex 14</p>	<p><u>PT 14 (2011): Irradiation treatment for Ceratitis capitata (2011)</u></p>	<p><u>En,Ar,Z</u> <u>h,Fr,Es,</u> <u>Ru</u></p>	<p>17-07- 2012</p>
<p>ISPM 29</p>	<p><u>Recognition of pest free areas and areas of low pest prevalence</u></p>	<p><u>Es,Fr,Ar,</u> <u>Zh,En</u> <u>Es,Fr,Zh</u> <u>,Ar</u></p>	<p>15-12- 2011</p>

Approved ISPMS-16

ISPM 30	<u>Establishment of areas of low pest prevalence for fruit flies (Tephritidae)</u>	<u>Es,Fr,Zh,</u> <u>Ar,En</u> <u>Es,Fr,Zh,</u> <u>Ar</u>	15-12- 2011
ISPM 31	<u>Methodologies for sampling of consignments</u>	<u>Es,Fr,Zh</u> <u>,Ar,En</u> <u>Es,Fr,Zh</u> <u>,Ar</u>	15-12- 2011
ISPM 32	<u>Categorization of commodities according to their pest risk</u>	<u>Ar,Fr,Es,</u> <u>Zh,En</u> <u>Ar,Fr,Es</u>	16-08- 2012

Approved ISPMS-17

ISPM 33	<u>Pest free potato (<i>Solanum</i> spp.) micropropagative material and minitubers for international trade</u>	<u>Ar,Zh,Fr,</u> <u>Es,En</u> <u>Ar,Zh</u>	15-12-2011
ISPM 34	<u>Design and operation of post-entry quarantine stations for plants</u>	<u>Ar,Zh,Fr,E</u> <u>s,En</u> <u>Ar,Zh</u>	15-12-2011
ISPM 35	<u>Systems approach for pest risk management of fruit flies (<i>Tephritidae</i>)</u>	<u>En,Ar,Es,</u> <u>Fr,Zh,Ru</u>	17-07-2012
ISPM 36	<u>Integrated measures for plants for planting</u>	<u>En,Es,Fr,Z</u> <u>h,Ru,Ar</u>	17-07-2012