TECHNICAL DOCUMENT



SUPPORT TO INSPECTION AND PHYTOSANITARY CERTIFICATION



This support guide presents useful information on phytosanitary certification, along with pest fact sheets, for inspectors of phytosanitary control services based in African, Caribbean and Pacific (ACP) countries. It is intended to assist with completing phytosanitary certificates and identifying harmful organisms likely to cause interceptions of fruit and vegetables on entry into the European Union.

The annex to this guide is the sole property of the Food and Agriculture Organization of the United Nations (FAO).

This guide has been prepared by the Research & Innovation and Information & Communication services of COLEACP as part of the Fit For Market SPS programme financed by the European Union (European Development Fund, EDF).

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The collection is available online for COLEACP's members and beneficiaries.

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Disclaimer

Note that this publication is advisory only. The elements included within it are not exhaustive or exclusive, and they may or may not be relevant, depending on the crops and pests concerned. The effective implementation and supervision of inspections remains the sole responsibility of the national authorities in each country.

INSPECTION AND PHYTOSANITARY CERTIFICATION FOR EXPORT TO THE EU - KEY RECOMMENDATIONS

This is a brief summary from COLEACP outlining some key recommendations for plant health inspectors. Please note that inspectors should receive regular updates and training to obtain the detailed information and skills needed to conduct their tasks effectively. In the case of regulated pests, inspectors must seek further information on any additional procedures that may be needed.

1. EUROPEAN PLANT HEALTH LEGISLATION - REGULATION (EU) 2016/2031

As from 14 December 2019, the new plant health Regulation (EU) 2016/2031 enters into force. The main changes for exporting countries are:

- A phytosanitary certificate is required for all fruits and vegetables (with five exceptions: pineapple, coconut, durian, banana, date);
- For the phytosanitary certificate, an Additional Declaration must be completed that includes the full wording of the specific requirements relevant to the particular commodity and pest;
- High-risk commodities require a full risk assessment by the European Food Safety Authority to decide if they can be imported, and under what conditions. *Momordica* (bitter melon, bitter gourd) has already been listed as high risk; others may follow.

Exporting countries have already faced a number of new EU Directives over the past 2 years (e.g. Directive 2019/523) that introduced strict requirements for several fruits and vegetables, including capsicum, mango and citrus.

In addition to new plant health rules, the EU Official Controls Regulation (EU 2017/625) brings in stricter documentary and physical checks on arrival in Europe; the European authorities must now inspect a minimum of 1% of all consignments with a phytosanitary certificate, rising up to 100% in the case of regulated pests.

All of these changes have important implications for national inspection services in exporting countries. In future, inspections at the point of export must be done very thoroughly. If pests are found on arrival in Europe, especially regulated pests, the EU authorities are likely to take action that has serious consequences for export sectors.

II. INSPECTION

The consignment must be free from any harmful organisms (pests). To ensure this, certain requirements must be met during the inspection.

Inspections must be conducted according to International Standard for Phytosanitary Measures (ISPM) 31, *Methodologies for Sampling of Consignments*, which specifies the sampling methods to be used.

For fruits (botanical term):

A minimum number of fruits per lot (fruits from the same plot) must be visually inspected.

Suspect fruit must be cut to detect harmful organisms that may be present inside. In case of doubt, a more thorough inspection should be carried out, including the inspection of more packaging and cutting of more fruit. Where there is a suspicion of the presence of a regulated organism, confirmation will be requested via laboratory analysis.

- Look for the presence of eggs, larvae and black faeces; holes in fruit, and specimens hidden in foliage or in packaging materials;
- 10% of sampled fruits must be cut and peeled superficially to find certain harmful organisms;

For leafy vegetables:

- Look for the presence of eggs, larvae and black faeces; also look for flower stems or buds with holes, and specimens hidden in foliage or in packaging materials;
- Hit a few branches / leaves on a table to see if caterpillars are dislodged or if there is excrement;

Requirements related to a pest-free zone, place or site of production

In some cases, importing countries require that fruit and vegetables come from a geographical area (country, zone, place of production, or production site) that is free from harmful organisms. It is only possible to certify pest-free status if inspections have been carried out in the production areas according to the methods established under the international standards (ISPM 4 et ISPM 10). Definitions and guidance on pest-free areas are available in the International Plant Protection Convention (IPPC)'s Guide for Establishing and Maintaining Pest Free Areas.

III. THE PHYTOSANITARY CERTIFICATE (CP)

The PC must include information on all regulated pests of concern for the exported product. The information that must be provided varies depending on the pest, and on which management option is selected. The example presented in Box 1 is specifically for false codling moth on capsicum; requirements specific to crops and pests are given in individual European Commission (EC) Implementing Regulations, which are continually being updated.

FALSE CODLING MOTH ON CAPSICUM

According to Directive 2019/523 issued in March 2019, exports of capsicum to the EU must meet one of the following four options. They must:

Fither

- a. Originate from a country recognised to be free from false codling moth in accordance with the relevant international standards for phytosanitary measures (ISPM 4);
- b. Originate in an area established by the national plant protection organisation (NPPO) in the country of origin
 as being free from false codling moth (ISPM 4);
- Originate in a place of production established by the NPPO in the country of origin as being free from false codling moth in accordance with ISPM 10;

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d. Have been subjected to an effective cold treatment or other effective treatment to ensure freedom from false codling moth. The treatment data should be indicated on the PC, provided that the treatment method together with documentary evidence of its effectiveness has been communicated in advance by the NPPO to the EC as a written dossier.

For option (d), the NPPO must submit a dossier to the EC describing in detail the "effective treatment" that will be applied to all capsicum exports to ensure they are free from false codling moth. As there are currently few effective single treatments available for post-harvest control on capsicum that will guarantee it is free of this pest, the new Directive allows for the use of a **systems approach**. This means developing an action plan that combines several different pest management measures that, used together, will significantly reduce pest risk (see ISPM 14). These measures may include surveillance, cultural practices, crop treatment, post-harvest disinfestation, inspection, and others.

In the dossier, the exporting country must provide sufficient information to the EU to enable the evaluation and approval of the proposed systems approach. Once the dossier is submitted, its acceptance or rejection by the European authorities should be checked using the following link: Declarations on pest status from non-EU countries. Exports can only take place once the dossier is officially accepted.

COMPLETING THE PC

For option (c) it is essential to include the following words in the PC

- Alongside the description of the product, write the unique identification number or name of the approved production site from which the produce was sourced;
- In the Additional Declaration, write: "The consignment complies with Option (c) of Annex IV, Part A, Section
 1, Point 16.6 of Implementing Directive (EC) 2019/523: production from an officially designated Pest Free
 Production Site".

For option (d), once a dossier (see above) has been submitted and accepted, it is essential to include the following words in the PC:

- In the Treatment section, write: "Systems approach";
- In the Additional Declaration, write: "The consignment complies with Option (d) of Annex IV, Part A, Section
 1, Point 16.6 of Implementing Directive (EC) 2019/523 and a systems approach for [pest scientific name] has
 been applied. Measures applied have been communicated to the EU on the dd/mm/yyyy"

The PC must be completed according to the guidelines for phytosanitary certificates (ISPM 12). These must be consulted (see appendix) to ensure that the PC is filled in accordance with current standards.

If pests are detected, or the products do not comply with the requirements of the importing country, the PC cannot be issued. A standard declaration concerning the absence of harmful organisms is mentioned in the PC model for export approved by the IPPC. However, some importing countries require a supplementary declaration which must be indicated in the "Additional Declaration" part of the PC.

- From 14 December 2019, on the basis of the new Regulation (EU) 2016/2031 Article 71(2), the Additional Declaration must include the full wording of the relevant specific requirement (see example in Box 1).
- In the case of option (d) of Directive 2019/523, an exporting country that has previously sent a dossier to the EU must provide information on the processing in the "Additional Declaration" box (see example in Box 1). The term "effective treatment" includes the application of a systems approach as described in ISPM 14. It is very important to complete the Additional Declaration correctly:
 - If the systems approach is applied (integration of different risk management measures), then the term "systems approach" should be mentioned in the "Additional Declaration" section and in the Treatment section
 Additional Information;
 - If a post-harvest treatment is applied (e.g. cold treatment), the term «post-harvest» should be indicated and the treatment must be mentioned. In addition, the details of this post-harvest treatment type (e.g. cold treatment), temperature, time must be mentioned in the "Treatment" section of the PC.
- If the requirements are related to sites/places/production areas free of pests, traceability must be guaranteed, for example in the case of options (a, b and c) of Directive 2019/523; see the specific requirements in the legislation.
- The PC and its annex(es), if any, must be completed in a clearly legible manner, whether printed, typed, stamped (e.g. certificate number) or handwritten.
- The (parts of) empty boxes must be crossed out.
- Each addition, adaptation and/or deletion must be dated, initialled and stamped, with the exception of the manual addition of the certificate number.
- It is possible to certify shipments electronically (e.g. using the EU's online management tool TRACES.NT or the IPPC's ePhyto system).

IV. DATA RETENTION

Laboratory results, inspections, and phytosanitary certificates must be kept for at least 3 years. This may involve storing the information contained in the PC in a computer database.

FACT SHEETS TO HELP IDENTIFY HARMFUL ORGANISMS



ANTHONOMUS EUGENII

Pepper weevil

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IDENTITY

Synonyms

Anthonomus aeneotinctus, Anthonomochaeta eugenii

Common name

Pepper weevil

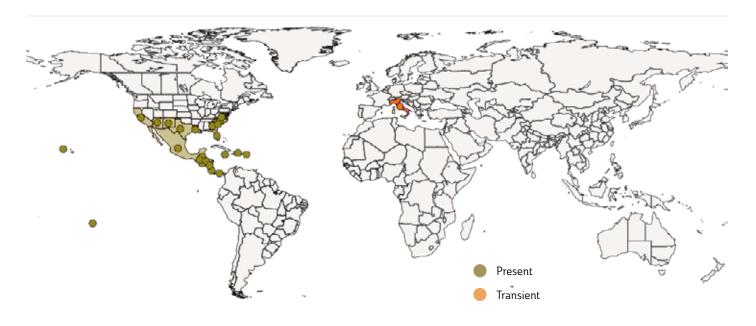
Taxonomic ranking

Insecta: Coleoptera: Curculionidae

MAJOR HOST PLANTS

Capsicum annuum (pepper), Capsicum frutescens (pepper), Solanum melongena (eggplant).

GEOGRAPHICAL DISTRIBUTION



EU IMPORT ACTION

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, punctures or holes in the fruit. Also check for hidden specimens in foliage and packaging materials.

You will find more information in the «Inspection and certification» sheet.

DESCRIPTION AND SYMPTOMS

- Egg: less than 1 mm long, grey, and oval in shape.
- Larva (a): there are three stages of development (1 mm, 1.9 mm, 3.3 mm). Larvae are creamy white in colour with a brown head. They develop and feed inside flower buds and fruits, consuming both seeds and flesh, and create tunnels in the pericarp of the fruit.
- Pupa (b): the pupa resembles the adult in form, except that the wings are not fully developed. It is white when first formed, but eventually becomes yellowish with brown eyes.
- Adult (c): 2-3 × 1.5-1.8 mm, black in colour with a slightly curved rostrum used to puncture plants. After pupation the adult creates a hole to emerge from the fruit and feed on the flower buds and immature fruit. If no buds or fruit are available, it can also feed on leaves.
- Symptoms: The most important damage is the destruction of flower buds and immature fruits, which turn yellow and fall to the ground. The main symptoms on fruits are egg-laying punctures (d); a resinous substance and brown spots on the outer surface of the fruit; and damage inside the fruit (brown discoloration of seeds and presence of excrement) (e).







a) Larva

b) Pupa







d) Egg-laying punctures on pepper



e) Brown discoloration of seeds and presence of excrement

Sources: Map - EPPO Global Data Base. Last update September 2019.

Image (a.1) - Entomology & Nematology Department of UF. Image (a.2) - Plant Health Portal. Image (b) - EPPO Global Data Base. Image (c) - Plant Health Portal. Image (d) - EPPO Global Data Base. Image (e) - Plant Health Portal.

For more information: EPPO Global Data Base.

BEMISIA TABACI

Cotton whitefly

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IDENTITY

Synonyms

Bemisia gossypiperda, B. longispina, B. nigeriensis

Common names

Cotton whitefly, sweet potato whitefly

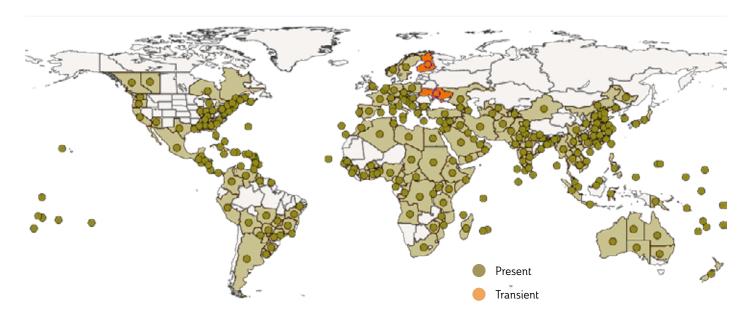
Taxonomic ranking

Insecta: Hemiptera: Sternorrhyncha: Aleyrodidae

MAJOR HOST PLANTS

Manihot esculenta (manioc), Ipomoea batatas (sweet potato), Solanum lycopersicum (tomato), Capsicum spp. (peppers, chillies), Cucurbita pepo (courgette, squash), Cucumis sativus (cucumber), Lactuca sativa (lettuce), Gossypium spp., Nicotiana spp., Euphorbia pulcherrima, Hibiscus spp., Gerbera spp., Gloxinia spp., Begonia spp., Fuchsia spp., Lantana spp., Pelargonium spp., Primula spp., Bougainvillea spp.

GEOGRAPHICAL DISTRIBUTION



EU IMPORT ACTION

The detection of a single living individual at any stage of development leads to rejection of the entire lot. *Bemisia tabaci* is a vector of guarantine viruses.

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, punctures or holes in the fruit. Also check for hidden specimens in foliage and packaging materials.

You will find more information in the «Inspection and certification» sheet.

DESCRIPTION AND SYMPTOMS

- Egg: elongated (about 0.25 mm long), yellowish in colour.
- Larva (a): colour changes from translucent to creamy yellow.
- Pupa (b): 0.7 mm long, red-yellow in colour.
- Adult (c): about 1 mm, sulphur yellow in colour, covered with very white waxy dust. Adults are located on the undersides of leaves (d).

Feeding by larvae and adults causes numerous chlorotic spots on the leaves of affected plants, as well as irregular fruit ripening in some cases (e).

Bemisia tabaci also causes significant indirect damage by transmitting viruses and depositing honeydew.



d) Adults, pupae and larvae on the inside of the leaves

e) Irregular ripening of tomatoes

Sources: Map - EPPO Global Data Base. Last updated September 2019.

Image (a) - EPPO Global Data Base. Image (b) - EPPO Global Data Base.

Image (c) - EPPO Global Data Base. Image (d) - EPPO Global Data Base.

Image (e) - Entomology at the University of Kentucky.

For more information: EPPO Global Data Base.

HELICOVERPA ARMIGERA

Tomato grub

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IDENTITY

Synonyms

Heliothis armígera, Chloridae armigera

Common names

Tomato grub, corn earworm, cotton bollworm

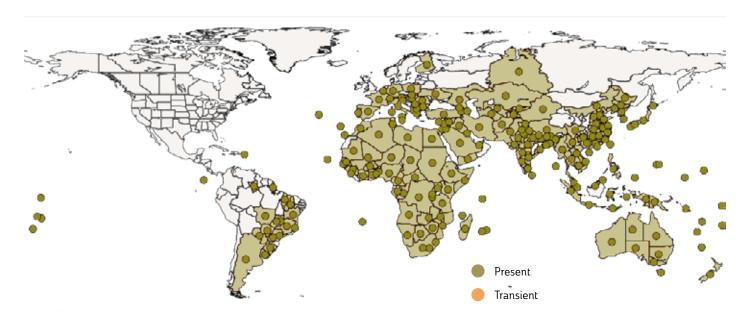
Taxonomic ranking

Insecta: Lepidoptera: Noctuidae: Heliothinae

MAJOR HOST PLANTS

Solanum lycopersicum (tomato), Solanum tuberosum (potato), Zea mays (maize), Phaseolus spp. (beans), Medicago sativa (alfalfa), Cicer arietinum (chickpeas), Citrus spp. (citrus fruits), Glycine max (soybean), Sorghum spp. (sorghum), Linum spp. (flax), Gossypium spp. (cotton), Nicotiana tabacum (tobacco).

GEOGRAPHICAL DISTRIBUTION



EU IMPORT ACTION

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, punctures or holes in the fruit. Also check for hidden specimens in foliage and packaging materials.

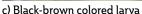
You will find more information in the «Inspection and certification» sheet.

DESCRIPTION AND SYMPTOMS

- Egg (a): 0.4-0.6 mm in diameter, white to yellowish.
- Larva: 30-40 mm long when mature. Light green (b) to black-brown (c) in colour with striated patterns on the abdomen.
- Adult (d): 14-18 mm long, colour variable, but male usually greenish-grey and female orange-brown.
- Symptoms: Penetration of caterpillars into the fruit allows access by pathogens, causing fruit rot.









d) Adult

Sources: Map - EPPO Global Data Base. Last update October 2019.

Image (a) - Encyclopédie des ravageurs européens.

Image (b) - Pestnet.

Image (c) - EPPO Global Data Base.

Image (d) - Landcare Research.

For more information: EPPO Global Data Base.

LEUCINODES ORBONALIS

Eggplant fruit borer

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IDENTITY

Synonym

Pycnarmon discerptalis

Common names

Eggplant fruit borer, brinjal fruit borer

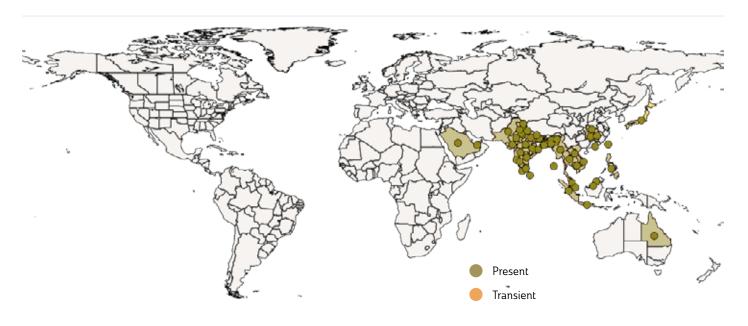
Taxonomic classification

Insecta: Lepidoptera, Crambidae, Leucinodes

MAJOR HOST PLANTS

Solanum melongena (eggplant), Solanum aethiopicum (bitter eggplant).

GEOGRAPHICAL DISTRIBUTION



EU IMPORT ACTION

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, punctures or holes in the fruit. Also check for hidden specimens in foliage and packaging materials.

You will find more information in the Inspection and certification sheet.

DESCRIPTION AND SYMPTOMS

- Larva (a): up to 15 mm long, light pink in colour. Larvae break into the eggplant and feed from the inside. They
 also pierce tender twigs, causing wilting and dieback of terminal branches and reducing the plant's ability to
 bear fruit.
- Adult (b): 20 mm with wings extended. Adults are white, spotted with brown, with a long, greyish-white abdomen.
- Symptoms (c): penetration by larvae into a fruit or vegetable is characterised by small holes covered with excrement.







a) Larva





b) Adult

c) Symptoms: small holes covered with excrement

Sources: Map - EPPO Global Data Base. Last update: March 2019.
lmage (a.1) - Seychelles Agricultural Agency. lmage (a.2) - Wikipedia.
lmage (b) - Flickr. © All rights reserved

Image (c) - Cabi.

For more information: EPPO Global Data Base.

LIRIOMYZA SATIVAE

Vegetable leaf miner

This data sheet is intended for inspectors of phytosanitary control services based in African, Caribbean and Pacific (ACP) countries, to help identify harmful organisms that may cause interceptions of fruit and vegetables on entry into the European Union. The document was prepared by COLEACP's Research and Innovation Department as part of its Fit For Market SPS programme, which is funded by the European Union at the request of the ACP Group of States.

IDENTITY

Synonyms

Liriomyza pullata, L. canomarginis, L. minutiseta, L. munda,

L. guytona, L. propepusilla

Common name

Vegetable leaf miner

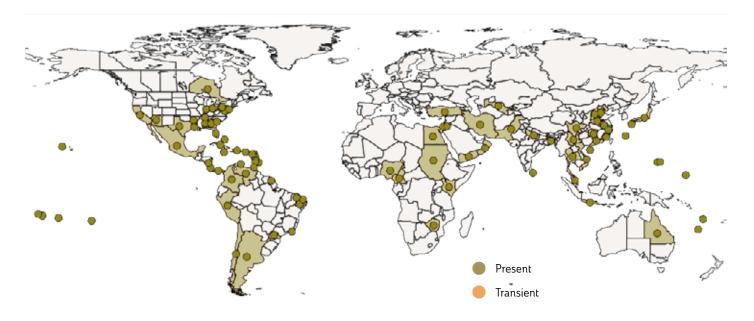
Taxonomic classification

Insecta: Diptera: Agromyzidae

MAIN HOST PLANTS

Cucurbita pepo (courgette), Solanum lycopersicum (tomato), Solanum tuberosum (potato), Solanum melongena (eggplant), Capsicum annuum (pepper), Apium graveolens (celery), Cucumis sativus (cucumber), Amaranthus spp. (amaranth), Cucumis melo (melons), Pisum sativum (peas), Phaseolus lunatus (Lima bean), Phaseolus vulgaris (common bean), Vicia faba (faba bean), Medicago sativa (lucerne), Aster spp., Dahlia spp., Lathyrus spp., Tropaeolum spp.

GEOGRAPHICAL DISTRIBUTION



EU IMPORT ACTION

The batch is destroyed if live specimens (larvae or adults) are detected at the points of import.

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, pits or holes in the fruit. Also check for hidden specimens in foliage and packaging materials.

You will find more information in the "Inspection and certification" sheet.

DESCRIPTION AND SYMPTOMS

- Egg: $0.2-0.3 \times 0.1-0.15$ mm, white to translucent
- Larva (a): 3 mm long, transparent at the beginning of their development stage and then turning yellow-orange
- Pupa (b): oval (1.3–2.3 mm × 0.5–0.75 mm) and of variable colour (yellow-orange darkening to golden brown)
- Adult (c): 1–1.3 mm long. The abdomen is covered with a shiny black mesotonum on the upper side and yellow on the sides

Symptoms are only visible on the leaves (d). They are characterised by the presence of winding galleries. The most affected leaves can turn yellow, wither and dry out.



Sources: Map - EPPO Global Data Base. Last updated June 2019.

Image (a) - Infonet Biovision.

Image (b) - EPPO Global Data Base.

Image (c) - Agro Link.

Image (d) - Polyphagous Agromyzid Leafminers.

For more information: EPPO Global Data Base.



SPODOPTERA SPP. Armyworms

This data sheet is intended for inspectors of phytosanitary control services based in African, Caribbean and Pacific (ACP) countries, to help identify harmful organisms that may cause interceptions of fruit and vegetables on entry into the European Union. The document was prepared by COLEACP's Research and Innovation Department as part of its Fit For Market SPS programme, which is funded by the European Union at the request of the ACP Group of States.

IDENTITY

Species

Spodoptera frugiperda, S. eridania, S. littoralis, S. dolichos, S. latifascia

Common names

Fall armyworm, semi-tropical armyworm, African armyworm, sweet potato armyworm

Taxonomic classification

Insecta: Lepidoptera: Noctuidae

MAJOR HOST PLANTS (MORE THAN 40 FAMILIES)

Solanum melongena (eggplant), Capsicum spp. (peppers, chillies), Phaseolus spp. (beans), Glycine max (soybean), Solanum tuberosum (potato), Ipomoea batatas (sweet potato), Colocasia esculenta (taro), Brassica spp. (broccoli, cauliflower, cabbage, swede, turnip), Zea mays (maize), Medicago sativa (alfalfa), Oryza sativa (rice), Linum usitatissimum (flax), Arachis hypogaea (groundnut), Cannabis sativa (hemp), Gossypium hirsutum (cotton), Nicotiana tabacum (tobacco).

GEOGRAPHICAL DISTRIBUTION

Below are the species most notified by the EU according to their origin:

- Sub-Saharan Africa: Spodoptera littoralis, S. frugiperda, S. eridania
- Caribbean: S. frugiperda, S. eridania
- Asia-Oceania: S. litura, S. frugiperda
- Europe: S. littoralis (Mediterranean region)

EU IMPORT ACTION

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, punctures or holes in the fruit. Also check for hidden specimens in foliage and packaging materials.

You will find more information in the Inspection and certification sheet.

DESCRIPTION AND SYMPTOMS

After eggs (a) hatch, Spodoptera littoralis larvae (b) measure 2 to 3 mm long, with a white body and a black head. Mature larvae (c) are 40 to 45 mm long, hairless and variable in colour, most often green to dark brown with white specks and orange-brown longitudinal lines. Their backs have segments with dark spots on them. Adult (d): wings 32 to 38 mm wide, grey to greyish-brown in females and darker in males. The upper wings are white.





a) Eggs

b) Larvae





c) Mature Larvae

d) Adult

Sources: Image (a) - EPPO Global Data Base.

Image (b) - Flickr.

Image (c) - EPPO Global Data Base.

Image (d) - EPPO Global Data Base.

For more informations: EPPO Global Data Base.



TEPHRITIDAE Non-European fruit flies

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IDENTITY

Species

Anastrepha fraterculus, A. ludens, Bactrocera dorsalis (Dacus dorsalis), B. minax (D. citri), B. tsuneonis (D. tsuneonis), B. cucumis (D. cucumis), Ceratitis rosa, C. quinarian, Ceratitis cosyra

Common name

Non-European fruit flies

Taxonomic classification

Insecta: Diptera

MAJOR HOST PLANTS

Mangifera indica (mango), Carica papaya (papaya), Citrus spp. (citrus fruits), quelques variétés de Cucurbita spp., Momordica spp., Luffa spp., Laganeria spp., Solanum spp.

GEOGRAPHICAL DISTRIBUTION

Species most intercepted by the EU according to origin:

- Sub-Saharan Africa: Bactrocera sp., Ceratitis cosyra, Bactrocera dorsalis, Ceratitis cosyra
- Caribbean: Anastrepha obliqua, Anastrepha sp., Batrocera sp.
- **East Africa**: Batrocera sp.

EU IMPORT ACTION

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, punctures or holes in the fruit. Also check for hidden specimens in foliage and packaging materials.

You will find more information in the Inspection and certification sheet.

DESCRIPTION AND SYMPTOMS

Larva (a): generally bright white. Their appearance is altered by the colour of the food they ingest (for example, larvae that feed on ripe mangoes tend to be yellow). All fruit fly larvae are of similar size and shape.

Adult (b): 4 to 5 mm long with a silver-grey thorax and black spots. Its wings are broad and transparent, with three orange-grey bands and many small black spots on the basal third.

Symptoms (c): Attacked fruits have egg-laying punctures that are difficult to detect in the early stages. As the infection develops, the tissue surrounding the wound discolours; the infection progresses differently depending on the type of fruit and the possible action of secondary organisms such as fungi. In green fruits, the tissues surrounding the epidermis become soft (so the fruit crushes easily). Before external symptoms become visible, larvae can cause extensive internal damage leading to fruit rot. The presence of oviposition punctures on the fruit is sufficient to predict damage. Several punctures can be observed on mangoes; they are generally less numerous on cucurbits.





a) Larvas

b) Adult



c) Fruit damaged by larvae

Sources: Image (a) - Department of Primary Industries and Regional Development - Government of Western Australia. Image (b) - Department of Primary Industries and Regional Development - Government of Western Australia.

Image (c) - EPPO Global Data Base.

For more informations: EPPO Global Data Base

THAUMATOTIBIA LEUCOTRETA

False codling moth

This data sheet is intended for inspectors of phytosanitary control services based in African, Caribbean and Pacific (ACP) countries, to help identify harmful organisms that may cause interceptions of fruit and vegetables on entry into the European Union. The document was prepared by COLEACP's Research and Innovation Department as part of its Fit For Market SPS programme, which is funded by the European Union at the request of the ACP Group of States.

IDENTITY

Synonyms

Argyroploce batrachopa, A. leucotreta, Cryptophlebia leucotreta, Enarmonia batrachopa

Common name

Faux carpocapse

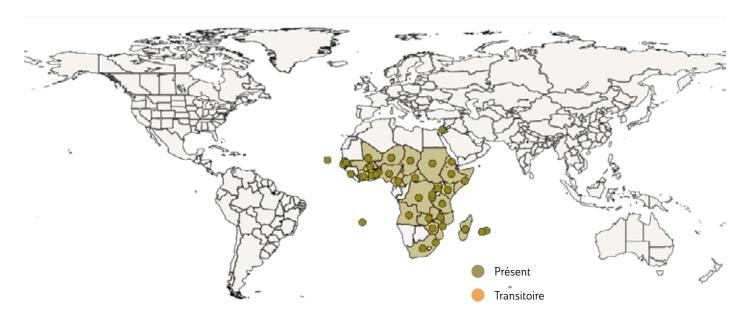
Taxonomic classification

Insecta: Lepidoptera: Tortricidae: Thaumatotibia

MAJOR HOST PLANTS

Capsicum spp. (peppers, chillies), Citrus spp. (citrus fruits), Persea americana (avocado), Solanum melongena (eggplant), Prunus spp. (peaches, plums), Mangifera indica (mango), Zea mays (maize), Punica granatum (pomegranate), Vitis vinifera (grapevine), Litchi chinensis (litchi), Macadamia spp. (Macadamia), Gossypium spp. (cotton), Quercus robur (oak), Ricinus communis (castor).

GEOGRAPHICAL DISTRIBUTION



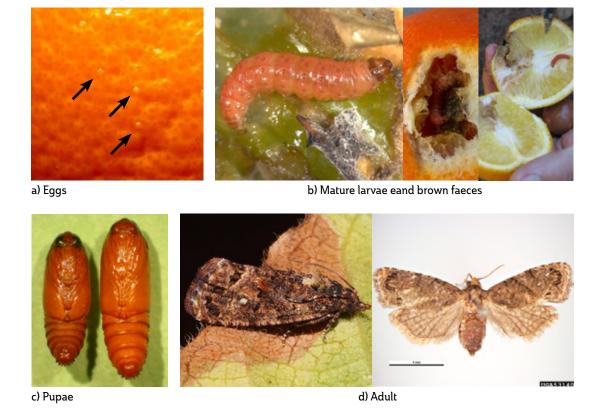
EU IMPORT ACTION

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, punctures or holes in the fruit. Also check for hidden specimens in foliage and packaging materials

You will find more information in the Inspection and certification sheet.

DESCRIPTION AND SYMPTOMS

- Eggs (a): 1 mm long, flat and oval, with a bright reticulated sculpture and a translucent white colour.
- Larvae (b): 1 to 1.3 mm long, creamy-white in colour, black spots with short hairs and a brown/black head.
 Mature larvae are about 15 mm long and pink in colour, tending towards orange/yellow on the sides with a light brown head. The presence of larvae is characterised by brown faeces in the fruit
- Pupae (c): 7 mm long and yellow to black-brown in colour.
- Adults (d): 15 to 20 mm wingspan, grey, brown, black and orange-brown in colour.



Sources: Map - EPPO Global Data Base. Last update: July 2019.

Image (a) - Center for Invasive Species and Ecosystem Health.

Image (b.1) - EPPO Global Data Base. Image (b.2) - EPPO Global Data Base. Image (b.3) - Andermatt Biocontrol.

Image (c) - Tortricids of Agricultural Importance.

Image (d.1) - Inventaire National du Patrimoine Naturel. Image (d.2) - UW Navigation.

For more informations: EPPO Global Data Base.

THRIPS PALMI

Melon thrips

This data sheet is intended for inspectors of phytosanitary control services based in African, Caribbean and Pacific (ACP) countries, to help identify harmful organisms that may cause interceptions of fruit and vegetables on entry into the European Union. The document was prepared by COLEACP's Research and Innovation Department as part of its Fit For Market SPS programme, which is funded by the European Union at the request of the ACP Group of States.

IDENTITY

Synonyms

Chloethrips aureus, Thrips leucadophilus, T. gossypicola, T. gracilis, T. clarus, T. nilgiriensis

Common names

Melon thrips, Oriental thrips

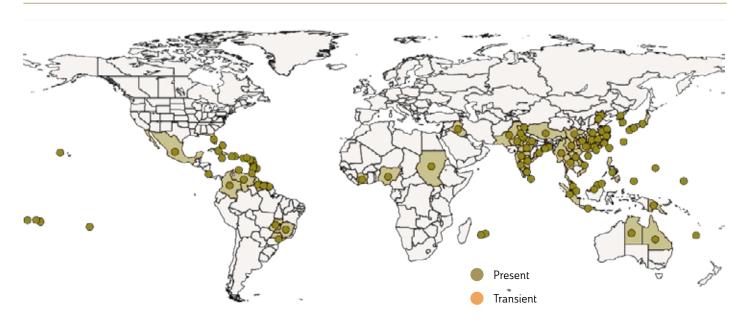
Taxonomic classification

Insecta: Thysanoptera: Thripidae: Thrips: Thrips palmi

PLANTES HÔTES MAJEURES

Capsicum spp. (peppers, chillies), Cucumis melo (melon), C. sativus (cucumber), Cucurbita pepo (squash, pumpkin), Benincasa hispida (wax gourd), Citrullus lanatus (watermelon), Pisum sativum (pea), Vigna unguiculata (cowpea), Phaseolus vulgaris (green bean), Glycine max (soybean), Solanum tuberosum (potato), Solanum melongena (aubergine), Helianthus annuus (sunflower), Sesamum indicum (sesame), Ficus spp. (fig), Gossypium spp. (cotton), Dendranthema spp. (chrysanthemum), Nicotiana spp. (tobacco), Cyclamen spp. (Persian violet), Orchidaceae (orchids).

GEOGRAPHICAL DISTRIBUTION



EU IMPORT ACTION

Visually inspect the goods according to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect harmful organisms that may be present inside. Look for eggs, larvae, faeces, punctures or holes in the fruit. Also check for hidden specimens in foliage and packaging materials

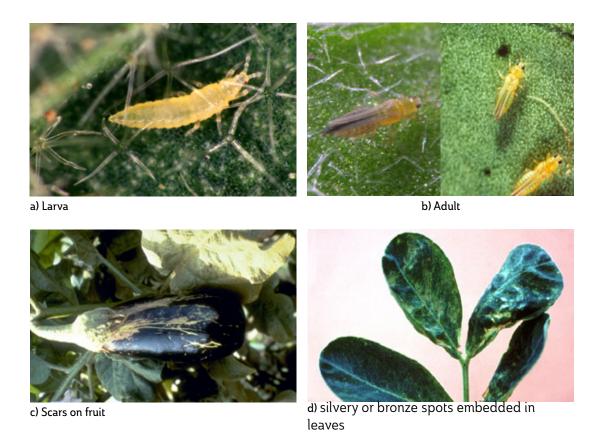
▶ You will find more information in the *Inspection* and *certification* sheet.

DESCRIPTION AND SYMPTOMS

Eggs: kidney-shaped eggs are laid within plant tissue (leaf, flower or fruit) and are not visible to the naked eye Larva (a): The highly mobile larvae are yellow in colour. They are similar in appearance to the adults. There are two larval stages, which are active feeders and may be found on any above-ground part of the plant.

Adult (b): very small (1.0 to 1.3 mm) and almost entirely yellow in colour, with fringed wings.

Symptoms: Larvae and adults feed on the contents of leaf cells, flowers and fruit surfaces, causing scars on fruit (c) and chlorosis of leaves. Characteristic symptoms include silvery or bronze spots embedded in leaves (d) and the presence of blackheads (excrement). Damage usually appears at the main leaf vein and eventually spreads to all parts of the plant. Developing plant parts, flowers and fruits are deformed, and leaves can dry out during heavy infestations.



Sources: Map - EPPO Global Data Base. Last update: April 2019.

Image (a) - Confédération suisse.

Image (b.1) - Bioline AgroSciences. Image (b.2) - Forestry Images.

Image (c) - EPPO Global Data Base.

Image (d) - Cabi.

For more informations: EPPO Global Data Base.

TUTA ABSOLUTA

Tomato leafminer

This data sheet is intended for inspectors of phytosanitary control services based in African, Caribbean and Pacific (ACP) countries, to help identify harmful organisms that may cause interceptions of fruit and vegetables on entry into the European Union. The document was prepared by COLEACP's Research and Innovation Department as part of its Fit For Market SPS programme, which is funded by the European Union at the request of the ACP Group of States.

IDENTITY

Synonyms

Tuta absoluta, Gnorimoschema absoluta, Phthorimaea absoluta, Scobipalpula absoluta, Scrobipalpuloides absoluta

Common name

Tomato leafminer

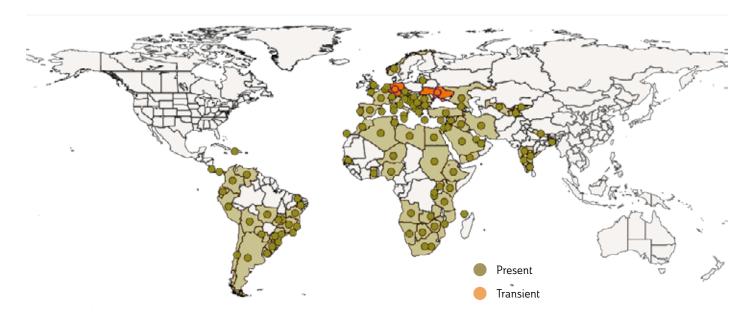
Taxonomic classification

Insecta: Lepidoptera: Gelechiidae: Tuta: Tuta absoluta

MAJOR HOST PLANTS

Solanum lycopersicum (tomate).

GEOGRAPHICAL DISTRIBUTION



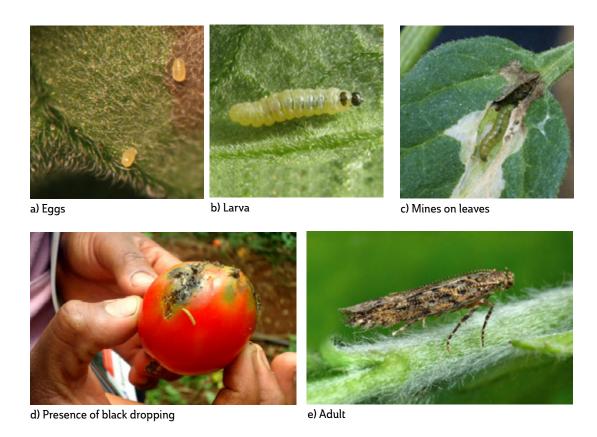
EU IMPORT ACTION

Visually inspect the goods according to to International Standard for Phytosanitary Measures (ISPM) 31: Methodologies for sampling of consignments. Suspect fruit must be cut to detect internal pests. Look for eggs, larvae/excrement, punctures, holes in fruit, specimens hidden in foliage and packaging materials.

You will find more information in the Inspection and certification sheet.

DESCRIPTION AND SYMPTOMS

- Eggs (a) small (0,4 mm de long et 0,2 mm de large), cylindrical, and cream to yellowish in colour.
- Larvae (b) creamy-white in the early stages (4,5 mm) of development, turning green or pink with a black-brown head in the later stages (7 à 9 mm). Larvae sink into leaf tissue and form irregular mines that later become necrotic. Over time, the leaf turns brown and dries out. Damage caused by *Tuta absoluta* can be confused with that caused by *Liriomyza*, although *T. absoluta* mines on leaves are whitish and wider (c) than those of *Liriomyza*.
- Larvae penetrate fruit at the calyx and dig tunnels in the flesh, visible by the presence of black droppings (d).
- Adults (e) less than 7 mm long with black spots on the brown forewings and filiform antennae.



Sources: Map - EPPO Global Data Base. Last update: July 2019.

Image (a) - Flickr.

Image (b) - ao & midori Biocontrol.

Image (c) - Tecnologia Ambiente.

Image (d) - Dispatch.

Image (e) - Tecnologia Ambiente.

For more information: EPPO Global Data Base.

ANNEX

HOW TO COMPLETE A PHYTOSANITARY CERTIFICATE

ISPM 12

ENG

Phytosanitary certificates

Produced by the Secretariat of the International Plant Protection Convention (IPPC)

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INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

ISPM 12

Phytosanitary certificates

Produced by the Secretariat of the International Plant Protection Convention Adopted 2014; published 2016

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Publication history

This is not an official part of the standard

1996-05 CEPM-3 added the topic *Phytosanitary* certificates (1996-003)

1996-08 EWG developed draft text

1997-10 CEPM-4 postponed the discussion

1998-05 CEPM-5 discussed draft text

1999-05 CEPM-6 revised draft text and approved for member consultation

1999-06 member consultation

2000-11 ISC-2 revised draft for adoption

2001-04 ICPM-3 adopted standard

ISPM 12. 2001. Guidelines for phytosanitary certificates. Rome, IPPC, FAO.

2006-04 CPM-1 added topic Revision of ISPM 12 (2006-035)

2006-11 SC approved Specification 38 Revision of ISPM 7 and ISPM 12

2008-02 EWG revised draft

2009-05 SC revised draft and approved for MC

2009-06 Member consultation

2010-02 Steward revised the draft based on member comments

2010-05 SC-7 revised draft

2010-11 SC approved draft to be submitted for adoption, revision to Appendix 1 unfinished

2011-03 CPM-6 adopted revised ISPM 12

ISPM 12. 2011. Phytosanitary certificates. Rome, IPPC, FAO

2011-06 Open-ended working group on electronic certification

2012-02 Steward and IPPC steering committee on ePhyto developed drafted text

2012-04 SC revised and approved draft for member consultation

2012-06 Member consultation

2012-11 Steward revised draft based on member comments

2013-05 SC-7 revised draft

2013-06 Substantial concerns commenting period

2013-10 Steward revised draft based on member comments

2013-11 SC approved draft to be submitted for adoption

2014-04 CPM-9 adopted revised Appendix 1 to ISPM 12

2014-09 Secretariat corrected the title in English of Appendix 1, which had been erroneously modified after adoption, as following *Electronic phytosanitary certificatesion*, information on standard XML schemas, and exchange mechanisms (2014). The title now accurately reflects the Appendix 1 as adopted by CPM

2015-03 CPM-10 noted ink amendments in relation to "phytosanitary status".

2015-04 IPPC Secretariat incorporated ink amendments and reformatted standards following revoking of standards procedure from CPM-10 (2015). The Secretariat also corrected the appendix 1 title from "schemes" to "schema".

2015-09 IPPC Secretariat incorporated minor editorial changes.

Publication history last modified: 2015-12.

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Adoption

This standard was first adopted by the Third Session of the Interim Commission on Phytosanitary Measures in April 2001 as *Guidelines for phytosanitary certificates*. The first revision of the standard was adopted by the Sixth Session of the Commission on Phytosanitary Measures in March 2011 as the present standard. The revised Appendix 1 was adopted by the Ninth Session of the Commission on Phytosanitary Measures in April 2014.

INTRODUCTION

Scope

This standard provides the requirements and guidelines for the preparation and issuance of phytosanitary certificates¹ (phytosanitary certificates for export and phytosanitary certificates for reexport).

Specific guidance on requirements and components of a phytosanitary certification system to be established by national plant protection organizations (NPPOs) is provided in ISPM 7 (*Phytosanitary certification system*).

References

The present standard refers to International Standards for Phytosanitary Measures (ISPMs). ISPMs are available on the International Phytosanitary Portal (IPP) at https://www.ippc.int/core-activities/standards-setting/ispms.

IPPC. International Plant Protection Convention. Rome, IPPC, FAO.

Definitions

Definitions of phytosanitary terms used in this standard can be found in ISPM 5 (Glossary of phytosanitary terms).

Outline of requirements

Phytosanitary certification is used to attest that consignments meet phytosanitary import requirements and is undertaken by an NPPO. A phytosanitary certificate for export or for re-export can be issued only by a public officer who is technically qualified and duly authorized by an NPPO.

A phytosanitary certificate for export is usually issued by the NPPO of the country where the plants, plant products or regulated articles were grown or processed. A phytosanitary certificate for re-export is issued by the NPPO of the country of re-export (a country where the commodity has not been grown or processed) when the consignment has not been subjected to the risk of infestation and complies with the phytosanitary import requirements of the importing country, and the original phytosanitary certificate or a certified copy is available.

NPPOs shall use the model phytosanitary certificates of the IPPC.

¹ The IPPC refers to a "phytosanitary certificate" for export purposes and a "phytosanitary certificate for reexport" for re-export purposes. In order to keep the use of these terms simple and clear in this standard "phytosanitary certificate for export" and "phytosanitary certificate for re-export" are used. The term "phytosanitary certificates" (plural) is used to cover both types of certificate.

Where the required phytosanitary information exceeds the space available on the phytosanitary certificates, an attachment may be added with this information.

Phytosanitary certificates should accompany the consignment or may be transmitted by mail or other means, or where agreed between countries, NPPOs may use electronic phytosanitary certificates, using standardized language, structure of the message and exchange protocols.

Phytosanitary certificates may have a limited duration of validity. The NPPO of the exporting country or the importing country may make relevant stipulations.

Specific procedures should be followed in the case of replacement phytosanitary certificates, certified copies of phytosanitary certificates, and alterations to phytosanitary certificates. Invalid or fraudulent phytosanitary certificates should not be accepted.

Special consideration is given to situations of re-export, particularly when the issuance of a phytosanitary certificate for export is not required by the country of re-export and when specific phytosanitary measures need to be conducted in the country of origin.

BACKGROUND

Phytosanitary certification is used to attest that consignments meet phytosanitary import requirements and is applied to most plants, plant products and other regulated articles that are traded internationally. Phytosanitary certification contributes to the protection of plants, including cultivated and uncultivated/unmanaged plants and wild flora (including aquatic plants), habitats and ecosystems in the importing countries. Phytosanitary certification also facilitates international trade in plants, plant products and other regulated articles by providing an internationally agreed document and related procedures.

Article V.2(a) of the IPPC stipulates how phytosanitary certificates should be issued:

Inspection and other related activities leading to issuance of phytosanitary certificates shall be carried out only by or under the authority of the official national plant protection organization. The issuance of phytosanitary certificates shall be carried out by public officers who are technically qualified and duly authorized by the official national plant protection organization to act on its behalf and under its control with such knowledge and information available to those officers that the authorities of importing contracting parties may accept the phytosanitary certificates with confidence as dependable documents.

[See also ISPM 7]

This was clarified at the FAO Conference in 1997 during adoption of the 1997 revision of the IPPC: "It is understood that ... 'public officers who are technically qualified and duly authorized by the national plant protection organization' include officers from the national plant protection organization". "Public" in this context means employed by a level of government, not by a private company. "Include officers from the national plant protection organization" means that the officer may be directly employed by the NPPO, but does not have to be directly employed by the NPPO.

The IPPC also states requirements for the use of model phytosanitary certificates (in Article V.3):

Each contracting party undertakes not to require consignments of plants or plant products or other regulated articles imported into its territories to be accompanied by phytosanitary certificates inconsistent with the models set out in the Annex to this Convention. Any requirements for additional declarations shall be limited to those technically justified.

REQUIREMENTS FOR PHYTOSANITARY CERTIFICATION

1. Phytosanitary Certificates

1.1 Purpose of phytosanitary certificates

Phytosanitary certificates are issued to attest that plants, plant products or other regulated articles meet the phytosanitary import requirements of importing countries and are in conformity with the certifying statement. Phytosanitary certificates may also be issued to support re-export certification to other countries. Phytosanitary certificates should be issued only for these purposes.

1.2 Types and forms of phytosanitary certificates

In the Annex to the IPPC, there are two types of certificates: a "phytosanitary certificate" (see Annex 1 of this standard) for export purposes and a "phytosanitary certificate for re-export" (see Annex 2 of this standard) for re-export purposes².

A phytosanitary certificate for export is usually issued by the NPPO of the country of origin. A phytosanitary certificate for export describes the consignment and, through a certifying statement, additional declarations and treatment records, declares that the consignment meets phytosanitary

International Plant Protection Convention

ISPM 12-7

² See Scope, footnote 1, concerning terminology.

import requirements. A phytosanitary certificate for export may also be issued in certain re-export situations for plants, plant products and other regulated articles originating in countries other than the country of re-export if compliance with the phytosanitary import requirements can be attested by the country of re-export (e.g. by inspection).

A phytosanitary certificate for re-export may be issued by the NPPO of the re-exporting country in the case where the commodity in the consignment was not grown or processed to change its nature in that country and only where an original phytosanitary certificate for export or a certified copy is available. The phytosanitary certificate for re-export provides the link to a phytosanitary certificate issued in a country of export and takes into account any changes in phytosanitary status that may have occurred in the country of re-export.

Procedures for managing the issuance of the two types of phytosanitary certificates and the systems that ensure their legitimacy are the same.

According to Article V.2(b) of the IPPC, the IPPC model phytosanitary certificates provide standardized wording that shall be followed for the preparation of phytosanitary certificates. The standardization of the phytosanitary certificates is necessary to ensure consistency, that they are easily recognized, and that essential information is reported. NPPOs are encouraged to use a single format for their phytosanitary certificates for export and a single format for phytosanitary certificates for reexport and to place a sample of the phytosanitary certificates' format on the International Phytosanitary Portal (IPP) (https://www.ippc.int) in a manner that prevents falsification.

Phytosanitary certificates can be in paper form or, where it is accepted by the NPPO of the importing country, in electronic form.

Electronic phytosanitary certificates are the electronic equivalent of the wording and data of phytosanitary certificates in paper form, including the certifying statement, transmitted by authenticated and secure electronic means from the NPPO of the exporting country to the NPPO of the importing country. Electronic phytosanitary certification does not constitute text processing or other electronic generation of paper forms, which are then distributed non-electronically. Nor is it the transfer of an electronic version of the paper certificate (e.g. through e-mail).

NPPOs should apply safeguards against falsification of paper phytosanitary certificates, for example special papers, watermarks or special printing. When electronic certification is used, appropriate safeguards should also be applied.

Phytosanitary certificates are not valid until all requirements have been met and they are dated, signed and stamped, sealed, marked or completed electronically by the NPPO of the exporting or re-exporting country.

1.3 Attachments to phytosanitary certificates

If the information required to complete phytosanitary certificates exceeds the available space on the form, an attachment may be added. The information in the attachment should only include what is required on the phytosanitary certificates. All pages of attachments should bear the number of the phytosanitary certificates and should be dated, signed and stamped in the same manner as required for the phytosanitary certificates. Phytosanitary certificates should refer to any attachments in the appropriate section. If an attachment has more than one page, the pages should be numbered and the number of pages indicated on the phytosanitary certificates. Other documents such as the Convention on International Trade in Endangered Species (CITES) certificates may accompany the consignment along with the phytosanitary certificate, but such documents should not be considered attachments to the phytosanitary certificates nor should they be referenced on the phytosanitary certificate.

1.4 Electronic phytosanitary certificates

Electronic phytosanitary certificates may be issued where accepted by the NPPO of the importing country.

When using electronic phytosanitary certificates NPPOs should develop systems that generate certificates using standardized language, message structure and exchange protocols. Appendix 1 provides guidance on standardized language, message structure and exchange protocols.

Electronic phytosanitary certificates may be used subject to the following provisions:

- The mode of issue, transmission and level of security is acceptable to the NPPO of the importing country and if relevant to NPPOs of other countries involved.
- The information provided is consistent with the IPPC model phytosanitary certificates.
- The purpose of phytosanitary certification under the IPPC is realized.
- The identity of the issuing NPPO can be adequately established and authenticated.

1.5 Mode of transmission

Phytosanitary certificates should accompany the consignments for which they have been issued. Phytosanitary certificates may also be transmitted separately by mail or other means if accepted by the NPPO of the importing country. In the case of electronic phytosanitary certificates, they should be directly available to the relevant NPPO officials. In all cases, phytosanitary certificates should be available to the NPPO of the importing country upon the consignment's arrival.

1.6 Duration of validity

The phytosanitary security of consignments may be lost after issuance of phytosanitary certificates and therefore the NPPO of the exporting or re-exporting country may decide to restrict the duration of the validity of phytosanitary certificates after issuance and prior to export.

The NPPO of the exporting or re-exporting country may assess the situation and define an appropriate period of validity before export occurs, taking into account the likelihood of the consignment becoming infested or contaminated prior to export or re-export. Such likelihood may be affected by packaging (sealed carton or loose packing) and storage environment (open air or enclosed), type of commodity and conveyance, time of year and type of pests. A phytosanitary certificate for export may still be used after this period for issuing a phytosanitary certificate for re-export, provided that the consignment has not been subjected to the risk of infestation and that the commodity still achieves the phytosanitary import requirements of the importing country.

NPPOs of importing countries may also stipulate as part of the phytosanitary import requirements the duration for which phytosanitary certificates remain valid.

2. Actions Taken with Issued Phytosanitary Certificates

2.1 Certified copies of phytosanitary certificates

A certified copy is a copy of the original of the phytosanitary certificate that is validated (stamped, dated and countersigned) by the NPPO indicating it is a true representative copy of the original phytosanitary certificate. It may be issued upon request by the exporter. It does not replace the original. Such copies are used primarily for re-export purposes.

2.2 Replacement of phytosanitary certificates

Phytosanitary certificates may be replaced at the request of an exporter for a consignment for which a phytosanitary certificate has already been issued. This should be done only in exceptional circumstances (e.g. damage to the phytosanitary certificates issued; change of addresses, country of destination or points of entry; missing or incorrect information) and should be carried out by the NPPO of the country that issued the phytosanitary certificates being replaced.

In all cases, the issuing NPPO should request exporters to return the original phytosanitary certificates and any certified copies that have already been issued for the consignments.

Other requirements concerning replacement of phytosanitary certificates include:

- Phytosanitary certificates returned for replacement should be retained by the NPPO of the issuing country and be cancelled. The new phytosanitary certificates should not have the same number as the certificate being replaced. The number of the original certificate should not be reused.
- When previously issued phytosanitary certificates cannot be returned and have left the care and control of the NPPO (for example because they are lost or in another country), the NPPO may decide that it is appropriate to issue a replacement certificate. The new phytosanitary certificate should not have the same number as the phytosanitary certificate being replaced but should refer to it by including an additional declaration stating that "This certificate replaces and cancels phytosanitary certificate no. [insert number] issued on [insert date]".

2.3 Alterations to phytosanitary certificates

Alterations should be avoided as they may create uncertainty about the validity of phytosanitary certificates. However, if alterations are necessary, they should be made only on the original phytosanitary certificates by the issuing NPPO. Alterations should be minimal and should be stamped, dated and countersigned by the issuing NPPO.

3. Considerations for Importing Countries and NPPOs Issuing Phytosanitary Certificates

NPPOs of importing countries may require phytosanitary certificates for regulated articles only. These are usually plants and plant products but may include articles such as empty containers, vehicles and organisms other than plants where phytosanitary measures are technically justified.

NPPOs of the importing countries should not require phytosanitary certificates for plant products that have been processed to the point where they have no potential for introducing regulated pests, or for other articles that do not require phytosanitary measures (see IPPC Article VI.2 and ISPM 32 (Categorization of commodities according to their pest risk)).

NPPOs should consult bilaterally when there are differences between their views regarding the technical justification for requiring phytosanitary certificates. Requirements for phytosanitary certificates should respect the principles of transparency, non-discrimination, necessity and technical justification (see ISPM 1 (*Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade*)).

3.1 Unacceptable phytosanitary certificates

NPPOs of importing countries should not accept phytosanitary certificates that they determine to be invalid or fraudulent. The NPPO of the declared country of issuance should be notified as soon as possible regarding unacceptable or suspect phytosanitary certificates as described in ISPM 13 (Guidelines for the notification of non-compliance and emergency action). Where the NPPO of the importing country suspects that phytosanitary certificates may be unacceptable, it may require the

prompt cooperation of the NPPO of the exporting or re-exporting country in determining the validity or non-validity of the phytosanitary certificates. The NPPO of the exporting or re-exporting country should take corrective action where necessary and review systems for the issuance of phytosanitary certificates so as to ensure that a high level of confidence is associated with its phytosanitary certificates.

3.1.1 Invalid phytosanitary certificates

Phytosanitary certificates are invalid if, for example, they have or they are:

- incomplete or incorrect information
- false or misleading information
- conflicting or inconsistent information
- wording or information that is inconsistent with the model phytosanitary certificates
- information added by unauthorized persons
- unauthorized (not stamped, dated or countersigned) alterations or deletions
- an expired period of validity unless used as a certified copy for re-export
- illegible (e.g. badly written, damaged)
- non-certified copies
- transmitted through a mode of transfer unauthorized by the NPPO (for electronic phytosanitary certificates)
- phytosanitary certification of plants, plant products and other regulated articles prohibited for import.

These are also reasons for rejecting phytosanitary certificates or for requesting additional information.

3.1.2 Fraudulent phytosanitary certificates

Fraudulent phytosanitary certificates typically include those:

- issued on non-authorized forms
- not dated, stamped, marked or sealed, and signed by the issuing NPPO
- issued by persons who are not authorized public officers.

Fraudulent phytosanitary certificates are invalid. The NPPO issuing phytosanitary certificates should have safeguards against their falsification. In the case of electronic phytosanitary certification, safeguards against falsification are an element of the electronic certification mechanism. The NPPO of the exporting country should take corrective action when notified of a non-compliance.

3.2 Import requirements for the preparation and issuance of phytosanitary certificates

Importing countries frequently specify import requirements that should be observed with respect to the preparation and issuance of phytosanitary certificates. Examples of what an importing country may require include:

- that phytosanitary certificates be completed in a specific language or one of its listed languages (however, countries are encouraged to accept one of the official languages of FAO, preferably English)
- the period of time allowed for issuance after inspection or treatment and the period of time between the issuance of phytosanitary certificates and the dispatch of the consignment from the exporting country
- that phytosanitary certificates be completed by typing or if handwritten, be in legible capital letters (where the language allows it)

- the units of measurement to be used in the description of the consignment and for other declared quantities.

4. Specific Considerations for the Preparation and Issuance of Phytosanitary Certificates

Phytosanitary certificates shall only be issued by public officers who are technically qualified and duly authorized by the NPPO.

Phytosanitary certificates should only be issued if it is confirmed that the phytosanitary import requirements are met.

Phytosanitary certificates should contain the necessary information to clearly identify the consignment to which each relates.

Phytosanitary certificates should only contain information related to phytosanitary matters. They should not include statements related to non-phytosanitary requirements such as animal or human health matters, pesticide residues, radioactivity, commercial information (e.g. letters of credit), or quality.

To facilitate cross-referencing between phytosanitary certificates and documents not related to phytosanitary certification (e.g. letters of credit, bills of lading, CITES certificates), notes may accompany phytosanitary certificates that associate them with the identification code, symbol or numbers of the relevant documents that require cross-referencing. Such notes should be used only when necessary and should not be considered part of phytosanitary certificates.

All sections of the phytosanitary certificates should be completed. Where no entry is made, the term "None" should be entered or the line should be blocked out or a line drawn through the section to prevent unauthorized additions.

For re-export of consignments specific information from the country of origin may be necessary; however, this may not be available on a phytosanitary certificate for export (e.g. lack of the specific information for the additional declaration of a phytosanitary certificate for export, or a phytosanitary certificate for export itself is not required by the country of re-export). In such cases, if the specific phytosanitary import requirements cannot be met within the country of re-export, no phytosanitary certificate for re-export may be issued. However, the following may apply:

- Where the phytosanitary certificate for export is required by the country of re-export, on request by exporters, the NPPO of the country of origin may provide additional phytosanitary information (e.g. the results of a growing season inspection) to that required by the country of re-export. Such information may be necessary for the issuance of phytosanitary certificates for re-export. This information should be placed in the additional declaration section, under the subheading "Additional official phytosanitary information" (see section 5).
- Where a phytosanitary certificate for export is not required by the country of re-export, on request from an exporter, the NPPO of the country of origin may nevertheless issue a phytosanitary certificate for export. This would be for consignments intended for re-export to other countries in order to provide additional phytosanitary information necessary for the issuance of phytosanitary certificates for re-export.

In both cases above, the country of re-export should ensure that the identity of the consignment is maintained and that it has not been subjected to the risk of infestation.

Phytosanitary certificates should be issued before dispatch; however, they may also be issued after dispatch of a consignment provided that:

- the phytosanitary security of the consignment has been assured, and

- the NPPO of the exporting country has undertaken sampling, inspection and treatments necessary to satisfy phytosanitary import requirements before dispatch of the consignment.

If these criteria are not met, phytosanitary certificates should not be issued.

In the case where phytosanitary certificates are issued after dispatch, the inspection date should be indicated in the additional declaration section if required by the importing country.

5. Guidelines and Requirements for Completing Sections of a Phytosanitary Certificate for Export

Information on completing the sections of the phytosanitary certificate for export is provided as follows:

[Headings in bold refer to the sections of the model certificate, see model in Annex 1]
No
Each phytosanitary certificate for export should have a unique identification number, which allows for trace-back of consignments, facilitates audits and serves for record-keeping.
Plant Protection Organization of
The name of the country issuing the phytosanitary certificate for export should be listed here along with the name of the NPPO.
TO: Plant Protection Organization(s) of
The name of the importing country should be listed here. Where a transit country and the importing country have specific phytosanitary requirements that include the need for a phytosanitary certificate for export, the names of both countries should be listed and the transit country should be indicated. Care should be taken to ensure that the phytosanitary import or transit requirements of each country are met and appropriately indicated. In cases where the consignment is imported and then re-exported to another country, the names of both countries may be inserted, provided the phytosanitary import requirements of both countries have been met.
I. Description of Consignment
Name and address of exporter: This information identifies the source of the consignment to facilitate its trace-back and audit by the NPPO of the exporting country. The address of the exporter should be located in the exporting
country. The name and address of an exporter's local agent or shipper should be used where an international company with a foreign address is the exporter.
Declared name and address of consignee:
The name and address inserted here should be in sufficient detail to enable the NPPO of the importing country to confirm the identity of the consignee and, where necessary, to be able to conduct trace-back of non-compliant imports. Where the consignee is not known, "To order" may be used if the NPPO of the importing country permits the use of the term and accepts any associated risks. The importing country may require that the address of a consignee be a location in the importing country.
Number and description of packages:
The number of packages and their description should be included. Sufficient detail should be included in this section to enable the NPPO of the importing country to link the phytosanitary certificate for export with the corresponding consignment. In some cases (e.g. grain and bulk timber), shipping containers and/or railcars are considered the package and the number may be included (e.g. 10 containers). In cases of bulk shipments, the term "in bulk" may be used.

Place of origin: _

Distinguishing marks:
Distinguishing marks on packages (e.g. lot numbers, serial numbers or brand names) and conveyance
identification numbers or names (e.g. container and railcar identification numbers or vessel name in
the case of bulk shipments) should be included if necessary for the identification of the consignment.

The place of origin refers to places where the commodity was grown or produced and where it was possibly exposed to infestation or contamination by regulated pests. In all cases, the name of the country or countries of origin should be stated. Normally a consignment gains its phytosanitary status from the place of origin. Countries may require that the name or code of the pest free area, pest free place of production or pest free production site be identified. Further details on the pest free area, pest free place of production or pest free production site may be provided in the additional declaration section.

If a commodity is repacked, stored or moved, its phytosanitary status may change over a period of time as a result of its new location through the possible infestation or contamination by regulated pests. Phytosanitary status may also be changed by processing, disinfecting or treating a commodity that results in removing possible infestation or contamination. Thus a commodity may gain its phytosanitary status from more than one place. In such cases, each country and place, where necessary, should be declared with the initial place of origin in brackets, e.g. declared as "country X of export (country Y of origin)".

If different lots within a consignment originate in different places or countries, all countries and places where necessary should be indicated. To assist with trace-back in such cases, the most relevant place for undertaking trace-back may be identified, for example the exporting company where records are stored.

If plants were imported to or moved within a country and have been grown for a specific period of time (depending on the commodity concerned, but usually one growing season or more), these plants may be considered to have changed their country or place of origin, provided that the phytosanitary status is determined only by that country or place of further growth.

Declared means of conveyance: _____

This section refers to how the commodity is transported when leaving the certifying country. Terms such as "ocean vessel", "boat", "aircraft", "road", "truck", "rail", "mail" and "carried by hand" may be used. The ship's name and voyage number or the aircraft's flight number may be included if known. The means of conveyance is generally as declared by the exporter. Often this will be only the first means of conveyance used directly after issuance of the phytosanitary certificate for export. Consignments frequently move in such a way that the means of conveyance can change, for example a container that is transferred from a ship to a truck. If the distinguishing marks identify the consignment, it is sufficient to declare only the first means of conveyance. This is then not necessarily the means of conveyance used when arriving in the country of import.

Declared	point of	entry:	
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This should be the first point of arrival in the country of destination, or if not known, the country name. Where the consignment transits through another country this may need to be recorded if the country of transit has phytosanitary requirements for transiting consignments. The entry point of the country of transit, or if not known the country name, should be noted in brackets.

The point of entry is declared by the exporter at the time of issuance of the phytosanitary certificate for export. This point of entry may change for various reasons, and entry into the country at a place other than the declared point of entry should not normally be considered as non-compliance. However, when the NPPO of the importing country prescribes specified points of entry in its phytosanitary import requirements, then one of the specific points of entry should be declared and the consignment should enter through that point.

Name of produce and quantity declared:

This section should be sufficiently descriptive of the commodity and should include the name of the plant, plant product or other regulated article, unit and the quantity as accurately as possible to enable the NPPO of the importing country to verify the contents of the consignment. International codes may be added to facilitate identification (e.g. Customs codes) and internationally recognized units and terms should be used (e.g. metric system). Because different phytosanitary import requirements may apply to the different intended uses (e.g. consumption as compared with propagation) or degree of processing (e.g. fresh as compared with dried), the intended use or degree of processing should be specified. Entries should not refer to trade names, sizes or other commercial terms.

Botanical name of plants:

The information inserted here should identify plants and plant products using accepted scientific names, at least to genus level but preferably to species level.

It may not be feasible to provide botanical names for certain regulated articles and products of complex composition such as stock feeds. In these cases, the NPPOs of the importing and exporting countries may agree on a suitable common name descriptor, or the words "Not applicable" or "N/A" should be entered.

Certifying statement

This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party and to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.

They are deemed to be practically free from other pests.* [*Optional clause]

In most instances specific phytosanitary import requirements exist or regulated pests are specified and the certifying statement on the phytosanitary certificate for export is used to certify conformity with these phytosanitary import requirements.

In instances where phytosanitary import requirements are not specific, the NPPO of the exporting country may certify the general status of the consignment for any pests believed by it to be of phytosanitary concern.

NPPOs of exporting countries may include the optional clause on their phytosanitary certificate for export. NPPOs of importing countries cannot request that the optional clause be added.

"Appropriate official procedures" refers to procedures carried out by the NPPO or persons authorized by the NPPO for purposes of phytosanitary certification. Such procedures should be in conformity with ISPMs where appropriate. The procedures may be specified by the NPPO of the importing country taking into account any relevant ISPMs.

"Considered to be free from quarantine pests" refers to freedom from pests in numbers or quantities that can be detected by the application of phytosanitary procedures. It should not be interpreted to mean absolute freedom in all cases but rather that quarantine pests are believed not to be present based on the procedures used for their detection or elimination. It should be recognized that phytosanitary procedures have inherent uncertainty and variability, and involve some probability that pests will not be detected or eliminated. This uncertainty and probability should be taken into account in the specification of appropriate procedures.

In some cases where irradiation treatments have been applied, live stages of target pests may be present in the consignment. Providing the treatment has been applied in accordance with ISPM 18 (Guidelines for the use of irradiation as a phytosanitary measure) and the appropriate treatment has been applied to achieve the required response, the validity of this part of the certifying statement is not compromised because the detection of live stages of the target pest is not considered as non-compliance.

"Phytosanitary requirements", as provided by the importing country, are officially prescribed conditions to be met in order to prevent the introduction and/or spread of pests. Phytosanitary import requirements should be specified in advance by the NPPO of the importing country in legislation, regulations or elsewhere (e.g. import permits and bilateral and other arrangements).

"Importing contracting party" refers to governments that have adhered to the IPPC.

II. Additional Declaration

Additional declarations provide specific additional information on a consignment in relation to regulated pests. Additional declarations should be kept to a minimum and be concise. NPPOs of the importing countries should keep under review the need for additional declarations and they should not require additional declarations with the required wording similar to that already included in the certifying statement on the phytosanitary certificate for export. The text of additional declarations may be specified in phytosanitary regulations, import permits or bilateral agreements. Treatments should not be indicated in this section but in section III of the phytosanitary certificate for export.

Additional declarations should be only those containing specific phytosanitary information required by the NPPO of the importing country or requested by the exporter for future phytosanitary certification purposes and they should not repeat information that is otherwise noted in the certifying statement or in the treatment section. In cases where phytosanitary import requirements allow for several alternative measures, the NPPO of the exporting country should specify in its additional declaration which option has been applied.

Appendix 2 provides examples of text for different types of additional declarations that are often required by NPPOs of importing countries. When NPPOs consider it necessary to require or provide an additional declaration they are encouraged to use the standard wording as provided in Appendix 2.

In the case where an import permit is required by the importing country, the import permit number may be referred to here to assist cross-referencing.

Where a phytosanitary certificate for export is issued after the consignment's dispatch, and if required by the importing country the date of inspection should be added to this section of the phytosanitary certificate for export (see also applicable conditions in section 4).

Where additional official phytosanitary information is included for future phytosanitary certification purposes, such as re-export (see section 4), such information should be presented here. This information should be clearly separated from the additional declaration required by the importing country and should follow the added subheading "Additional official phytosanitary information".

III. Disinfestation and/or Disinfection Treatment

Entries should be as follows:

Date

The date that the treatment was applied to the consignment. Months should be written in full so that the month, day and year are not confused.

Treatment

The type of treatment applied to the consignment (e.g. heat treatment, irradiation).

Chemical (active ingredient)

The active ingredient of the chemical applied in the treatment.

Duration and temperature

The duration of the treatment and temperature in the treatment.

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Concentration

The concentration and dosage of the treatment applied.

Additional information

Any relevant additional information.

Treatments indicated should only be those that are acceptable to the importing country and are performed or initiated (in the case of transit) in the exporting country under supervision or authority of the NPPO of the exporting country to meet the phytosanitary import requirements.

For irradiation treatments, the provisions of ISPM 18 should be considered.

Stamp of organization

The official seal, stamp or mark identifying the issuing NPPO should be included on the phytosanitary certificate for export. The NPPO of the exporting country should normally use a uniform stamp, seal or mark within a country. It should be added by the public officer upon completion of the form or may be printed on the phytosanitary certificate for export. Care should be taken to ensure that the stamp, seal or mark does not obscure essential information.

Name of authorized officer, date and signature

The name of the public officer is printed, typed, stamped or handwritten in legible upper case (capital) letters (where the language allows it). The date is also to be printed, typed, stamped or handwritten in legible upper case (capital) letters (where the language allows it). The names of months should be written in full so that the month, day and year are not confused.

Although sections of the phytosanitary certificate for export may be completed in advance, the date stated should be the date of issuance. Upon request of the NPPO of the importing country, the NPPO of the exporting country should be able to verify the authenticity of signatures of authorized public officers. The phytosanitary certificate for export shall be signed only after it is duly completed.

When electronic phytosanitary certificates are issued, the certification data should be authenticated by the issuing NPPO. This authentication process is equivalent to the signature of the authorized public officer and stamp, seal or mark. Authenticated electronic certification data is equivalent to the completed paper document of the phytosanitary certificate for export.

Financial liability statement

The inclusion of a statement of the financial liability of the NPPO on the phytosanitary certificate for export is optional and at the discretion of the NPPO of the exporting country.

6. Considerations for Re-Export Situations and Transit

The phytosanitary certificate for re-export is the same as the phytosanitary certificate for export except for the text covering the certifying statement. In the certifying statement on the phytosanitary certificate for re-export, the NPPO of the country of re-export indicates by inserting ticks in the appropriate boxes whether the phytosanitary certificate for re-export is accompanied by the original phytosanitary certificate or a certified copy, whether the consignment has been repacked or not, whether the containers are original or new, and whether an additional inspection has been done.

If the identity of plants, plant products or other regulated articles in the consignment has not been maintained or the consignment has been subjected to the risk of infestation, or the commodity has been processed to change its nature, no phytosanitary certificate for re-export should be issued. The NPPO of the country of re-export, on request by exporters, may carry out appropriate phytosanitary procedures and if the NPPO is confident that the phytosanitary import requirements are met it should

issue a phytosanitary certificate for export. The place of origin should still be indicated in brackets on the phytosanitary certificate for export.

If the NPPO of the country of re-export does not require a phytosanitary certificate for the import of a commodity but the NPPO of the country of destination does, and the phytosanitary import requirements can be fulfilled by visual inspections or laboratory testing of samples, the country of re-export may issue a phytosanitary certificate for export with the country of origin indicated in brackets in the place of origin section of the phytosanitary certificate for export.

6.1 Considerations for issuing a phytosanitary certificate for re-export

When a consignment is imported into a country, then exported to another, the NPPO of the country of re-export, on request from exporters, may issue a phytosanitary certificate for re-export (see model in Annex 2). The NPPO should issue a phytosanitary certificate for re-export only if it is confident that the phytosanitary import requirements are met. Re-export phytosanitary certification may still be performed if the consignment has been stored, split up, combined with other consignments or repackaged, provided that it has not been exposed to infestation or contamination by pests. Where consignments are combined, all the relevant parts added to these consignments must be available and meet the same phytosanitary import requirements.

Before issuing a phytosanitary certificate for re-export, the NPPO should first examine the original phytosanitary certificate or certified copy that accompanied the consignment upon import and determine whether the requirements of the subsequent country of destination are more stringent, the same or less stringent than those certified by the phytosanitary certificate or its certified copies.

If the consignment is repacked or reloaded with its identity being affected or if a risk of infestation or contamination is identified, additional inspection should be carried out. If the consignment is not repacked and the phytosanitary security of the consignment has been maintained, the NPPO of the reexporting country has two options regarding inspection of the consignment for re-export:

- If the phytosanitary import requirements are the same or less stringent, the NPPO of the reexporting country may not need to undertake an additional inspection.
- If the phytosanitary import requirements are different or more stringent, the NPPO of the reexporting country may undertake an additional inspection to ensure that the consignment conforms to the phytosanitary requirements of the importing country where this requirement can be met through inspection.

The country of destination may have phytosanitary import requirements (e.g. growing season inspection, soil testing) that cannot be fulfilled by the country of re-export. In such cases, the country of re-export may still be able to issue a phytosanitary certificate for export or phytosanitary certificate for re-export if:

- *either* particular information on compliance has been included or declared on the phytosanitary certificate for export by the country of origin
- or an alternative phytosanitary measure can be applied (such as laboratory tests on samples or treatments) that is considered equivalent and in accordance with the phytosanitary import requirements of the country of destination.

Additional declarations on phytosanitary certificates for re-export where required should be based on the activities of the NPPO of the country of re-export. Additional declarations from the original phytosanitary certificate or certified copies should not be transferred to phytosanitary certificates for re-export.

When re-exports routinely occur, or are started, suitable procedures for satisfying these requirements may be agreed between the NPPOs of the countries of origin and re-export. This may include an exchange of written correspondence between the respective NPPOs on phytosanitary measures applied

at origin (e.g. growing season inspection, soil testing) which provides the assurance required for the country of re-export to certify the consignment as required by the country of destination.

The original phytosanitary certificate or its certified copy should accompany the consignment together with the phytosanitary certificate for re-export.

When a phytosanitary certificate for re-export is issued, the NPPO of the re-exporting country provides assurance related to the handling (e.g. splitting, combining, packing, storage) of the consignment in the country of re-export.

If the consignment is split up and the resulting consignments are re-exported separately, then phytosanitary certificates for re-export and certified copies of the phytosanitary certificate from the country of export will be required to accompany all such consignments.

The phytosanitary certificate for re-export shall be signed only after it is duly completed.

6.2 Transit

If a consignment is in transit through a country, the NPPO of the country of transit is not involved unless risks for the country of transit have been identified (ISPM 25 (Consignments in transit)).

If the phytosanitary security of the consignment has been compromised during transit, and the NPPO of the country of transit receives a request to become involved, the NPPO may perform phytosanitary certification for export in accordance with the provisions described in this standard.

A change of means of conveyance during transit or the transport of two or more consignments in one conveyance should not be considered a reason to issue phytosanitary certificates unless the phytosanitary security of the consignment is compromised.

Importing countries may have specific phytosanitary import requirements (e.g. require seals, specific packaging) addressed to the country of export for the import of consignments to be moved in transit through other countries if specific risks have been identified.

This annex is a prescriptive part of the standard.

ANNEX 1: Model phytosanitary certificate for export

[Original annexed to the IPPC]
No.
Plant Protection Organization of
TO: Plant Protection Organization(s) of
I. Description of Consignment
Name and address of exporter:
Declared name and address of consignee:
Number and description of packages:
Distinguishing marks:
Place of origin:
Declared means of conveyance:
Declared point of entry:
Botanical name of plants:
This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party and to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.
They are deemed to be practically free from other pests.*
II. Additional Declaration
[Enter text here]
III. Disinfestation and/or Disinfection Treatment
Date Treatment Chemical (active ingredient)
Duration and temperature
Concentration
Additional information
Place of issue
(Stamp of Organization) Name of authorized officer
Date
(Signature)
No financial liability with respect to this certificate shall attach to (name of Plant Protection Organization) or to any of its officers or representatives.*
*Optional clause

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International Plant Protection Convention

International Plant Protection Convention

This annex is a prescriptive part of the standard.

ANNEX 2: Model phytosanitary certificate for re-export

[Original annexed to the IPPC]	
	No
Plant Protection Organization of	(contracting party of re-export)
	(contracting party(ies) of import)
I. Description	of Consignment
Name and address of exporter:	_
Declared name and address of consignee:	
Number and description of packages:	
Distinguishing marks:	
Place of origin:	
Declared means of conveyance:	
Declared point of entry:	
Name of produce and quantity declared:	
Botanical name of plants:	
This is to certify that the plants, plant products or	other regulated articles described above
party of origin) covered by Phytosanitary certificat	r) from (contracting e No, *original □ certified true copy □ of
	are packed □ repacked □ in original □ *new □
	y certificate □ and additional inspection □, they are ary requirements of the importing contracting party,
and that during storage in (con	tracting party of re-export), the consignment has not
been subjected to the risk of infestation or infection	n.
*Insert tick in appropriate □ boxes	
II. Addition	al Declaration
[Enter	ext here]
III. Disinfestation and/o	r Disinfection Treatment
Date Treatment Chemica	I (active ingredient)
Duration and temperature	
Concentration	
Additional information	
Place of iss	
	d officer
Date	(Cimp et me)
	(Signature)
No financial liability with respect to this certification	ate shall attach to (name of Plant
Protection Organization) or to any of its officers or	
	•
**Optional clause	

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This appendix was adopted by the Ninth Session of the Commission on Phytosanitary Measures in April 2014.

This appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX 1: Electronic phytosanitary certificates, information on standard XML schemas and exchange mechanisms (2014)

Introduction

Electronic phytosanitary certificates are the electronic equivalents of phytosanitary certificates in paper form and may be used if they are accepted by the national plant protection organization (NPPO) of the importing country. When electronic phytosanitary certificates are issued by the NPPO of the exporting or re-exporting country, they should be made directly available to the NPPO of the importing country.

All the requirements and procedures in this standard apply to electronic phytosanitary certificates.

When using electronic phytosanitary certificates, NPPOs should develop a system for the issuance, transmission and receipt of electronic phytosanitary certificates that uses Extensible Markup Language (XML), standardized message structure and contents, and standardized exchange protocols.

This appendix provides guidance on these elements and refers to a page on the IPPC website (http://ePhyto.ippc.int) that provides links to further details – both IPPC and external websites and documents – on the information contained in this appendix. These links are referred to in the text as "Link 1", "Link 2" and so forth.

The system should include the following harmonized components to generate electronic phytosanitary certificates.

1. XML Message Structure

NPPOs should use the World Wide Web Consortium's (WC3) XML (*Link 1*) for exchange of electronic phytosanitary certification data.

The phytosanitary XML message structure is based on the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) Sanitary and Phytosanitary (SPS) XML schema (*Link 2*) and on XML data mapping, which indicates where the phytosanitary certification data should be placed in the XML schema.

The phytosanitary XML data mapping enables the generation of an electronic phytosanitary certificate for export (*Link 3*) and an electronic phytosanitary certificate for re-export (*Link 4*).

2. XML Schema Contents

To facilitate automatic electronic communication and processing of phytosanitary certification data, NPPOs are encouraged to use standardized (harmonized) terms, codes and text for the data elements associated with the XML message for electronic phytosanitary certificates.

The use of free (i.e. non-standardized) text should be limited when appropriate codes are available.

For dates and country names, harmonized text is available and no free text is anticipated to be required.

For scientific names of plants and pests, consignment description, treatments, additional declarations and points of entry, extensive lists of harmonized terms, codes and text are being developed and will be available. Free text may be inserted if the appropriate term, text or value does not appear in the lists.

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The process for maintaining and updating the lists of harmonized terms is being developed and will be described on the IPPC website (http://ePhyto.ippc.int). NPPOs will be requested to submit proposals for new harmonized terms using this process.

For data elements other than those above, no harmonization of terms and text is needed and therefore free text may be entered.

Further details on the information to be entered for the data elements in the XML message are provided in the following subsections.

2.1 Country names

For the names of countries (i.e. the country of origin, export, re-export, transit and destination) it is encouraged that the two-letter country codes of the International Organization for Standardization (ISO) (*Link 6*) be used.

2.2 Scientific names of plants and pests

For the scientific names of the plants in the consignment, the plants from which plant products were derived, and the regulated pests, the use of the database of scientific names available on the IPPC website (http://ePhyto.ippc.int) (Link 7) is encouraged.

2.3 Description of consignment

The type of commodity and the type of packaging should be included in the description of the consignment. It is encouraged that the commodity be described using IPPC commodity terminology (*Link 8*). It is also encouraged that the type of packaging be described using the United Nations Economic Commission for Europe (UNECE) Recommendation 21 (*Link 9*).

Other elements of the description of the consignment may include, where possible:

- weight, volume and height (which is encouraged to be described using UNECE Recommendation 20 (Link 10))
- declared means of conveyance (which is encouraged to be described using UNECE Recommendation 19 (Link 16))
- declared point of entry (which is encouraged to be described using the United Nations Code for Trade and Transportation Locations (UN/LOCODE) (*Link 15*)) or country name.

2.4 Treatments

It is encouraged that treatment types be specified using the IPPC's harmonized terms for treatment types (*Link 11*). Active ingredients are encouraged to be specified using the pesticide index of the Codex Alimentarius (*Link 12*). Other parameters (e.g. concentration, dosage, temperature, and duration of exposure) are encouraged to be described using UNECE Recommendation 20 (*Link 13*).

2.5 Additional declarations

Recommended standardized wording for additional declarations is provided in Appendix 2 and it is encouraged to be described using IPPC codes for additional declarations (*Link 14*). Free text may be used to supplement the additional declarations indicated on the IPPC website or to describe additional declarations that have not been standardized.

2.6 Name of authorized officer

The name of the authorized officer issuing the electronic phytosanitary certificates should be included in each types of electronic phytosanitary certificate.

3. Secure Data Exchange Mechanisms

NPPOs are responsible for the security of their national information technology (IT) system used for generating electronic phytosanitary certificates.

During transmission, the data should be encrypted to ensure that the electronic exchange of the electronic phytosanitary certification data between NPPOs is secure and authenticated. NPPOs should use a secure protocol with a minimum 128-bit encryption. Before transmission, the electronic phytosanitary certification data may be subjected to additional encryption (*Link 17*) that remains intact after transmission.

Transmission of data over the Internet from the NPPO of the exporting country to the NPPO of the importing country should be performed using secure IT mechanisms (e.g. Simple Object Access Protocol (SOAP), Secure/Multipurpose Internet Mail Extensions (S/MIME), File Transfer Protocol (FTP), Representative State Transfer (REST)) using systems that are mutually compatible.

The NPPO of the exporting country should make available to the exporter the actual electronic phytosanitary certificate number for the consignment.

Communication on the status of the message exchange between NPPOs should follow UN/CEFACT recommended standard messages (*Link 18*).

NPPOs are responsible for developing and maintaining their systems for exchanging electronic phytosanitary certification data. In cases where an exchange mechanism is suspended due to maintenance or unexpected system failure, the NPPO should notify other NPPOs as soon as possible.

4. Electronic Phytosanitary Certificate for Re-export

In paper-only systems, the original phytosanitary certificate for export or its certified copy should be available as an attachment to the phytosanitary certificate for re-export. In the situation where paper and electronic phytosanitary certificates are both in use, the following requirements should be met.

4.1 Electronic phytosanitary certificate for re-export with original phytosanitary certificate for export in electronic form

When both the phytosanitary certificate for export and the phytosanitary certificate for re-export are in electronic form, the electronic phytosanitary certificate for export should be attached electronically to the electronic phytosanitary certificate for re-export.

4.2 Electronic phytosanitary certificate for re-export with original phytosanitary certificate in paper form

When the original phytosanitary certificate for export is in paper form and the phytosanitary certificate for re-export is in electronic form, a scan of the original phytosanitary certificate for export (in PDF or other non-editable format) should be attached to the electronic phytosanitary certificate for re-export.

4.3 Paper phytosanitary certificate for re-export with original phytosanitary certificate in electronic form

When the original phytosanitary certificate for export is in electronic form and the phytosanitary certificate for re-export is in paper form, the electronic phytosanitary certificate for export should be printed and validated by the NPPO of the country of re-export by stamping, dating and countersigning. The printed version of the electronic phytosanitary certificate for export becomes a certified copy and should then, in paper form, be attached to the phytosanitary certificate for re-export.

5. Management of Electronic Phytosanitary Certificates Issued by NPPOs

5.1 Retrieval issues

If the NPPO of the importing country is unable to retrieve the electronic phytosanitary certificates, the NPPO of the exporting country should resubmit the original electronic phytosanitary certificates at the request of the NPPO of the importing country.

5.2 Alteration and replacement

If any of the information in electronic phytosanitary certificates needs to be altered after their issuance, the original electronic phytosanitary certificates should be revoked and replacement electronic phytosanitary certificates (*Link 5*) with alterations should be issued as described in this standard.

5.3 Cancelled dispatch

If the NPPO of the exporting country becomes aware of a consignment that is not dispatched after the issuance of electronic phytosanitary certificates, the NPPO of the exporting country should revoke the associated electronic phytosanitary certificates.

5.4 Certified copy

Certified copies of electronic phytosanitary certificates are printouts of the electronic phytosanitary certification data that are validated (stamped, dated and countersigned) by an NPPO attesting the authenticity of the data.

The printouts should be in the format that follows the standardized wording provided by the IPPC model phytosanitary certificates and recognized as phytosanitary certificates. However, the printouts may be XML data in XML format if accepted by the NPPO of the importing country.

6. Declared Name and Address of Consignee

In the case of paper phytosanitary certificates, for "Declared name and address of consignee" the term "To order" may be used in instances where the consignee is not known and the NPPO of the importing country permits use of the term.

With electronic phytosanitary certificates, the consignment information may arrive in the importing country well before the consignment arrives, which will allow pre-entry verification of the electronic phytosanitary certification data.

Instead of using the "To order" option, NPPOs are encouraged to require the electronic phytosanitary certificates to include the name and address of a contact person in the importing country responsible for the consignment.

This appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX 2: Recommended wording for additional declarations

Phytosanitary import requirements for additional declarations should preferably use the following wording. However, these are examples and are not the only statements that may be used.

1.	The consignment* was inspected and found free from (name of pest(s) or soil [to be specified]).			
2.	The consignment* was tested (method may be specified) and found free from (name of pest(s)).			
3.	The growing media in which the plants were grown was tested prior to planting and found free from (name of pest(s)).			
4.	(Name of pest(s)) is absent/not known to occur in (name of country/area).			
5.	The consignment* was produced in a pest free area for (name of pest(s))** area of low pest prevalence for (name of pest(s)) pest free place of production for (name of pest(s))** pest free production site for (name of pest(s))**.			
6.	The place of production**/production site/field** was inspected during the growing season(s)*** and found free from (name of pest(s)).			
7.	The plants/mother plants were inspected during the last growing season(s) *** and found free from (name of pest(s)).			
8.	The plants were produced <i>in vitro</i> (specify the <i>in vitro</i> technique) and found free from (name of pest(s)).			
9.	The plants were derived from mother plants that were tested (method may be specified) and found free from (name of pest(s)).			
10.	This consignment* was produced and prepared for export in accordance with (name of programme/reference to specific phytosanitary import requirement or a bilateral arrangement).			
11.	This consignment was produced from plant varieties resistant to (name of pest).			
12.	Plants for planting are in compliance with (specify the tolerance level(s)) established by phytosanitary import requirements for (specify the regulated non-quarantine pest(s)).			
* Ma	by be specified if this applies only to parts thereof.			
** If	applicable add: "including a surrounding buffer zone".			
***]	Number of times/growing seasons or specific period may be added as appropriate.			

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IPPC

The International Plant Protection Convention (IPPC) is an international plant health agreement that aims to protect cultivated and wild plants by preventing the introduction and spread of pests. International travel and trade are greater than ever before. As people and commodities move around the world, organisms that present risks to plants travel with them.

Organization

- ◆ There are over 180 contracting parties to the IPPC.
- Each contracting party has a national plant protection organization (NPPO) and an Official IPPC contact point.
- Nine regional plant protection organizations (RPPOs) work to facilitate the implementation of the IPPC in countries.
- IPPC liaises with relevant international organizations to help build regional and national capacities.
- The Secretariat is provided by the Food and Agriculture Organization of the United Nations (FAO).



International Plant Protection Convention (IPPC)

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