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COLEACP GUIDELINES

ON EXPORTING FRESH EGGPLANT AND TOMATO

FROM AFRICA, MADAGASCAR,
CAPE VERDE AND MAURITIUS



NEW PLANT HEALTH RULES
FROM THE EUROPEAN UNION



COLEACP

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PART 1

Meeting EU requirements for regulated pests tomato fruit borer (*Neoleucinodes elegantalis*), fall armyworm (*Spodoptera frugiperda*), tomato pinworm (*Keiferia lycopersicella*) and palm thrips (*Thrips palmi*)



1.1. BACKGROUND

The European Union has overhauled its plant health (phytosanitary) regulations. On 14 December 2019, the new [Plant Health Regulation \(EU\) 2016/2031](#) came into operation bringing rigorous new rules to prevent the introduction and spread of pests and diseases into the EU. This takes a much more proactive approach that affects the European fruit and vegetable sector, as well as imports from third countries outside of the EU. Under the new regime, special measures have been introduced for crops that are a known pathway into the EU of serious pests that could damage agriculture or the environment in Europe. These include requirements covering the export of several crops of the *Solanum* family. Some of the most stringent measures target *Capsicum* species (peppers), and these are described in COLEACP's [Guidelines on the Export of Fresh Capsicum](#). This guide outlines rules for the export of:

- *Solanum lycopersicum* (tomato)
- *S. melongena* (eggplant, or aubergine)
- *S. aethiopicum* (commonly known as bitter tomato, or Ethiopian eggplant)
- *S. macrocarpon* (commonly known as local garden egg, or sometimes African eggplant).

The rules for each of these crops vary as they are affected by different regulated pests.

The new rules stipulate the conditions that must be met before these crops can be exported into the EU. Most of these conditions are based on the International Standards for Phytosanitary Measures (ISPMs) developed by the International Plant Protection Convention (IPPC) of the UN Food and Agriculture Organization. Exporting countries must refer to the relevant ISPMs in order to fully understand and comply with the EU regulatory requirements.

Meeting the new rules requires immediate and concerted action from producers, exporters and National Plant Protection Organisations (NPPOs). There is no room for complacency; EU notifications due to the presence of regulated pests is likely to result in the introduction of more stringent measures.

National action plans and stakeholder engagement

Experience has shown that meeting the new EU rules requires effective dialogue and engagement between public and private sectors. All stakeholders must agree on the actions needed to ensure that exported citrus is free of the designated pests. This means identifying and agreeing on actions to be taken by private sector operators at all stages, from production to export. It also means agreeing to the responsibilities of the public sector authorities, in particular the NPPO.

COLEACP recommends the establishment of committees or task forces that bring all major stakeholders around the table to develop (and oversee the implementation) of a national citrus action plan. To be effective, this national action plan must be appropriate to the local context, and usable by the range of different producers and exporters concerned (large and small). It is essential that all stakeholders agree to, and implement, the national action plan. If just one exporter sends infested consignments to the EU, this could bring down the entire export sector.

COLEACP support

This document has been prepared by COLEACP for national authorities and operators in the citrus export sector to help orient the development of national action plans and dossiers to meet the new rules. It provides a framework to guide the process, and outlines the various elements that can be incorporated into a national approach to manage the pests concerned. It identifies the possible information to be provided, and actions to be taken, at all stages from production to export, by both public and private sectors. References and links to the relevant ISPMs are provided.

Note that the elements included here are not exhaustive. The national citrus action plan and dossier could include all or a selection of the measures outlined, as well as any others that may be available and appropriate locally.

1.2. REGULATORY CHANGES AFFECTING EXPORTS TO THE EU

This document outlines rules designed to prevent the introduction of tomato fruit borer (*Neoleucinodes elegantalis*), fall armyworm (*Spodoptera frugiperda*), palm thrips (*Thrips palmi*) and tomato pinworm (*Keiferia lycopersicella*) into the EU.

New rules on tomato fruit borer (*Neoleucinodes elegantalis*)

[Implementing Directive \(EU\) 2019/523](#), which was introduced in March 2019, brought in more stringent rules covering a number of pests, including the tomato fruit borer.¹ This Directive entered into force on 1 September 2019, and was updated and clarified in a new [Implementing Regulation \(EU\) 2019/2072](#) issued on 28 November 2019².

The new rules on tomato fruit borer apply to a number of fresh products exported into the EU from any third country, including fruits of *Capsicum annum*; bitter tomato (*Solanum aethiopicum*); tomato (*Solanum lycopersicum*); and eggplant/aubergine (*Solanum melongena*). Please note that rules concerning tomato fruit borer do not apply to local garden egg (*Solanum macrocarpon*).

Exports of these crops must be accompanied by a phytosanitary certificate (see section 1.3) and must meet requirements set out in one of the following options. There must be an official statement that the fruit originate in either:

¹ Annex IV. Part A, Section 1 Point 25.7.3 of Commission Implementing Directive (EU) 2019/523.

² Commission Implementing Regulation (EU) 2019/2072 of 28 November 2019 establishing uniform conditions for the implementation of Regulation (EU) 2016/2031 of the European Parliament and the Council, as regards protective measures against pests of plants, and repealing Commission Regulation (EC) No 690/2008 and amending Commission Implementing Regulation (EU) 2018/2019.

- a. a country recognised as being free from *Neoleucinodes elegantalis* (Guenée) in accordance with the relevant International Standards for Phytosanitary Measures, provided that this freedom status has been communicated in advance in writing to the Commission by the national plant protection organisation of the third country concerned, or
- b. an area established by the national plant protection organisation in the country of origin as being free from *Neoleucinodes elegantalis* (Guenée) in accordance with the relevant International Standards for Phytosanitary Measures, which is mentioned on the phytosanitary certificate referred to in Article 71 of Regulation (EU) No 2016/2031, under the rubric “Additional Declaration”, provided that this freedom status has been communicated in advance in writing to the Commission by the national plant protection organisation of the third country concerned, or
- c. a place of production established by the national plant protection organisation of the country of origin as being free from *Neoleucinodes elegantalis* (Guenée) in accordance with the relevant International Standards for Phytosanitary Measures and official inspections have been carried out in the place of production at appropriate times during the growing season to detect the presence of the pest, including an examination on representative samples of fruit, shown to be free from *Neoleucinodes elegantalis* (Guenée), and information on traceability is included in the phytosanitary certificate referred to in Article 71 of Regulation (EU) No 2016/2031, or
- d. an insect proof site of production, established by the national plant protection organisation in the country of origin as being free from *Neoleucinodes elegantalis* (Guenée), on the basis of official inspections and surveys carried out during the three months prior to export, and information on traceability is included in the phytosanitary certificate referred to in Article 71 of Regulation (EU) No 2016/2031.

Recommendations for NPPOs

For countries in Africa as well as Madagascar, Cape Verde and Mauritius, the tomato fruit borer (*N. elegantalis*) has not so far been recorded. At the present time, COLEACP therefore recommends that countries in this region select Option (a) as the most appropriate.

In order to use this option, NPPOs must take action:

- The NPPO in each exporting country must send an official notification to the European Commission informing them that they are a pest free country with regard to *Neoleucinodes elegantalis* (Guenée), in accordance with the methodology described in [ISPM 4](#).
- Pest-free status for *Neoleucinodes elegantalis* must then be acknowledged by the European Commission. This official acknowledgement can be checked on the EC webpage [“Declarations under Commission Implementing](#)

[Regulation \(EU\) 2019/2072](#)", which provides links to the current information provided by each country of origin and NPPO.

- Information about the pest free country status must be included in the phytosanitary certificate (see section 1.3).

It is strongly recommended that NPPOs contact COLEACP to obtain guidance on additional actions that need to be taken with regard to pest free country status for tomato fruit borer. If there is a problem or interception, or if a country is subject to an audit by the EU authorities (DG Santé), the NPPO in the exporting country must be able to provide the necessary documentation to justify pest free country status according to international standards ([ISPM 4](#)).

New rules on fall armyworm (*Spodoptera frugiperda*)

On 26 September 2019, the EC published [Implementing Decision \(EU\) 2019/1598](#) introducing emergency measures covering fall armyworm.³ The aim is to prevent the introduction and spread of this noxious pest within the EU. It extends the geographical scope of an earlier [Directive \(EU\) 2018/638](#),⁴ which was limited to Africa and the Americas. These emergency measures apply from 1 October 2019 until 30 June 2021.

The Implementing Decision applies to a number of fresh products exported into the EU from any country (except Switzerland). These crops include the fruit of *Capsicum* species; *Momordica*; bitter tomato (*Solanum aethiopicum*); local garden egg (*Solanum macrocarpon*), and eggplant/aubergine (*Solanum melongena*). It also covers plants (other than live pollen, plant tissue cultures, seeds and grains) of maize (*Zea mays*). Please note that these emergency measures do not apply to tomato (*S. lycopersicum*).

Exports of the fresh products mentioned above must be accompanied by a phytosanitary certificate⁵ (section 1.3), and must meet requirements set out in one of the following options:

- a. Originate in a country recognised to be free from fall armyworm in accordance with the relevant international standards for phytosanitary measures ([ISPM 4](#)),
or
- b. Originate in an area established by the national plant protection organisation in the country of origin as being free from fall armyworm (ISPM 4). The name of that area must be stated in the phytosanitary certificate under the section 'Place of Origin',

or

³ Commission Implementing Decision (EU) 2019/1598 of 26 September 2019 amending Implementing Decision (EU) 2018/638 establishing emergency measures to prevent the introduction into and the spread within the Union of the harmful organism *Spodoptera frugiperda* (Smith) (notified under document C(2019) 6818).

⁴ Commission Implementing Decision (EU) 2018/638 of 23 April 2018 establishing emergency measures to prevent the introduction into and the spread within the Union of the harmful organism *Spodoptera frugiperda* (Smith) (notified under document C(2018) 2291).

⁵ As specified in Article 13(1)(ii) of [Directive 2000/29/EC](#).

- c. They are not from a country or area recognised as free from fall armyworm, but they comply with the following conditions:
 - i. they have been produced in a production site that is registered and supervised by the NPPO;
 - ii. official inspections have been carried out in the production site during the three months prior to export, and no fall armyworm has been detected;
 - iii. prior to export, the produce has been subject to an official inspection and found to be free from fall armyworm;
 - iv. there is full traceability covering all movements from the place of production to the point of export;
 - v. the specified plants have been produced in a production site which has complete physical protection against the introduction of fall armyworm,

or
- d. They are not from a country or area recognised as free from fall armyworm, but they comply with points (c) (i to iv) above, and they have been subjected to an effective treatment to ensure they are free from fall armyworm,

or

- e. They are not from a country or area recognised as free from fall armyworm, but they have been subjected to an effective post-harvest treatment to ensure freedom from fall armyworm; this treatment must be indicated on the phytosanitary certificate in the “Treatment” section.

In practical terms, Options (c) and (d) are the most feasible; the first two require pest free countries or areas, which are not viable options for this pest in the countries concerned. Option (e) is also problematic as there are few effective single treatments available for post-harvest control of fall armyworm on these crops that will guarantee they are pest free.

Option (c) requires a place of production designated as pest free. This can be achieved using insect-proof screen houses coupled with the required inspections by the NPPO. This can be an effective option, but requires significant investment in infrastructure and the application of tight biosecurity measures.

Option (d) is the most accessible for the majority of exporters. It requires fresh products to be subjected to an effective treatment, in addition to specified supervision and inspections by the NPPO. It allows for the use of a systems approach for management of the pest (for more details, see Part 2 of this document).

Option (d): National Spodoptera action plan and the role of the NPPO

- There is no requirement for a dossier to be submitted to the European Commission outlining the systems approach that will be used for the “effective treatment”. Nevertheless, COLEACP strongly recommends that

exporting countries should prepare and implement a national action plan that specifies the measures to be taken by all stakeholders along the supply chain to manage fall armyworm in the products concerned. It is critical to ensure that there is no risk of it being present in exported consignments.

- There are specific actions that must be taken by the NPPO for all production sites that supply eggplant for export to the EU. To recap:
 - The NPPO must register and supervise all production sites.
 - The NPPO must carry out official inspections at all production sites during the three months prior to export. Exports can only be permitted if no fall armyworm has been detected at the production site.
 - The NPPO must conduct an official inspection prior to export. Exports can only be permitted if the produce is found to be free from fall armyworm.
- If there is a problem or interception, or if a country is subject to an audit by the EU authorities (DG Santé), the national authorities in the exporting country must be able to provide all the necessary documentation to demonstrate that the correct registration, supervision and inspections have been conducted.
- The NPPO must inspect all export consignments to ensure that there is full traceability covering all movements of the products concerned from the place of production to the point of export.

Rules on tomato pinworm (*Keiferia lycopersicella*)

[Implementing Regulation \(EU\) 2019/2072](#), issued on 28 November 2019, also introduced rules concerning the pest *Keiferia lycopersicella* on eggplant/aubergine (*Solanum melongena*) and tomato (*Solanum lycopersicum*). These state that exports of eggplant and tomato must be accompanied by a phytosanitary certificate (see section 1.3), and must meet requirements set out in one of the following options.

There must be an official statement that the fruit originates in either:

- a. a country recognised as being free of *Keiferia lycopersicella* (Walsingham) in accordance with relevant International Standards for Phytosanitary Measures ([ISPM 4](#));

or

- b. an area established by the national plant protection organisation in the country of origin as being free from *Keiferia lycopersicella* in accordance with the relevant International Standards for Phytosanitary Measures. This must be mentioned on the phytosanitary certificate under the section “Additional Declaration”;

or

- c. a place of production, established by the NPPO in the country of origin as being free from *Keiferia lycopersicella*, on the basis of official inspections and surveys carried out during the last three months prior to export. This must be mentioned on the phytosanitary certificate under the section “Additional Declaration”.

Recommendations for NPPOs

As in the case of tomato fruit borer, *Keiferia lycopersicella* has not so far been recorded in Africa, and is not known to be present outside of the Americas. At the present time, COLEACP therefore recommends that countries select Option (a) as the most appropriate.

In order to use this option, NPPOs must take action:

- The NPPO in each exporting country must send an official notification to the European Commission informing them that they are a pest free country with regard to *Keiferia lycopersicella* (Walsingham), in accordance with the methodology described in [ISPM 4](#).
- Pest free status for *Keiferia lycopersicella* must then be acknowledged by the European Commission. This official acknowledgement can be checked on the EC webpage “[Declarations under Commission Implementing Regulation \(EU\) 2019/2072](#)”, which provides links to the current information provided by each country of origin and NPPO.
- Information about the pest free country status must be included in the phytosanitary certificate (see section 1.3).

It is strongly recommended that NPPOs contact COLEACP to obtain guidance on additional actions that need to be taken with regard to pest free country status for tomato pinworm. If there is a problem or interception, or if a country is subject to an audit by the EU authorities (DG Santé), the national authorities in the exporting country must be able to provide the necessary documentation to justify pest free country status according to international standards (ISPM 4).

Rules on palm thrips (*Thrips palmi*)

[Implementing Regulation \(EU\) 2019/2072](#), issued on 28 November 2019, also introduced updated rules concerning *Thrips palmi* on eggplant/aubergine (*Solanum melongena*).

Eggplant and tomato exports must be accompanied by a phytosanitary certificate (section 1.3), and must meet requirements set out in one of the following options. There must be an official statement that the fruit either:

- a. originate in a country free from *Thrips palmi* Karny in accordance with relevant International Standards for Phytosanitary Measures;

or

- b. originate in an area established by the national plant protection organisation in the country of origin as being free from *Thrips palmi* in accordance with the relevant International Standards for Phytosanitary Measures, which is mentioned on the certificate referred to in Article 71 of Regulation (EU) No 2016/2031, under the rubric “Additional Declaration”;

or

- c. immediately prior to their export, have been officially inspected and found free from *Thrips palmi*.

Recommendations for NPPOs

National monitoring data will reveal the distribution of *Thrips palmi* in each country. However, the widespread distribution of this pest means that in most circumstances it will be necessary to use Option (c).

In this case the NPPO must conduct an official inspection prior to export. Exports can only be permitted if the produce is found to be free from *Thrips palmi*. If there is a problem or interception, or if a country is subject to an audit by the EU authorities (DG Santé), the national authorities in the exporting country must be able to provide all the necessary documentation to demonstrate that the correct supervision and official inspections have been conducted.

Other quarantine pests

Under national plant health legislation, a number of plant pests and diseases are classified as quarantine organisms. These are pests that are mainly or entirely absent from a country, but which could have a potentially serious economic, environmental or social impact if they were to be introduced. Most countries have a quarantine list that identifies the most dangerous harmful organisms whose introduction must be prohibited.

It is important to note that this document is not exhaustive. There are other EU quarantine pests that concern *Solanum* species, and whose introduction into the EU is banned.

For example, the whitefly *Bemisia tabaci* (non-European populations) is found on a wide variety of host plants. It is a serious problem for several crops, causing direct damage as well as acting as a vector of plant viruses. Export consignments of any crop, including eggplant and tomato, that are found to contain *B. tabaci* will be

intercepted and detained at EU border controls. It is therefore essential to monitor and avoid the presence of *B tabaci* and all other harmful organisms in export crops.

It is also important to note that the measures imposed by the EU vary according to pest category. The new [Plant Health Regulation \(EU\) 2016/2031](#) classifies all plant pests according to the following four categories:

- Union quarantine pests: not present at all in the EU territory or, if present, just locally and under official control. Strict measures must be taken to prevent their entry or further spread within the EU. Union quarantine pests are listed in [Directive 2000/29/EC](#).⁶
- Protected zone quarantine pests: present in most parts of the Union, but still known to be absent in certain “protected zones”. These pests are not allowed to enter and spread within these protected zones.
- Regulated non-quarantine pests: widely present in the EU territory, but since they have an important impact, imports should be guaranteed free or almost free from the pest.
- Priority pests: those with the most severe impact on the economy, environment and/or society. Priority pests such as fall armyworm (*S. frugiperda*) are generally subject to the most strict measures. Operators and NPPOs should regularly monitor the EU priority pest listing. A list of 20 priority pests was published in October 2019 ([Regulation EU 2019/1702](#)), but it is likely that other species will be added periodically.

1.3. COMPLETING THE PHYTOSANITARY CERTIFICATE

All plants and plant products imported into the EU from non-EU countries are subject to compulsory plant health checks ([Regulation \(EU\) 2016/2031](#): Annex V, Part B). These include:

- a review of the phytosanitary certificate and associated documents to ensure that the consignment meets EU requirements;
- an identity check to make sure that the consignment corresponds with the certificate;
- an inspection of the produce to ensure that it is free from harmful organisms.

Exports to the EU of the four *Solanum* crops covered by this guidance document must be accompanied by a phytosanitary certificate. There are strict requirements on how this should be filled, and it is important to note the following.

⁶ Directive 2000/29/EC lists EU quarantine pests in annexes I and II (Part A, Section I and II). Commission Implementing Directive (EU) 2017/1279, Commission Implementing Directive (EU) 2019/523 and Commission Implementing Regulation (EU) 2019/2072 have amended and updated Directive 2000/29/EC.

- The phytosanitary certificate must include information on all regulated pests of concern for the exported product. At the present time the regulated pests for these crops are as follows:

PEST	CROP			
	TOMATO <i>Solanum lycopersicum</i>	BITTER TOMATO <i>Solanum aethiopicum</i>	EGGPLANT/ AUBERGINE <i>Solanum melongena</i>	LOCAL GARDEN EGG <i>Solanum macrocarpon</i>
TOMATO FRUIT BORER <i>Neoleucinodes elegantalis</i>	X	X	X	-
TOMATO PSYLLID <i>Bactericera cockerelli</i>	X	X	X	X
FALL ARMYWORM <i>Spodoptera frugiperda</i>	-	X	X	X
TOMATO PINWORM <i>Keiferia lycopersicella</i>	X	-	X	-
MELON THRIPS <i>Thrips palmi</i>	-	-	X	-

- The information to be provided varies according to the pests, the crop, and the management option selected from the regulation.

It is critically important to complete the certificate correctly, as European importing countries have a low tolerance of mistakes. Each year consignments entering Europe from third countries are rejected and destroyed because the phytosanitary certificate is filled incorrectly.

The European Commission has provided clear advice on what information must be given in the “Additional Declaration” section of the phytosanitary certificate, and the wording that must be used. The guidance below from COLEACP is based on this advice from the Commission.

- Occasionally, operators experience challenges at EU border controls due to the wording of the Additional Declaration. If they have followed the COLEACP guidance closely, they should refer the border control agents to the online EC [Summary Report](#) that explains the agreed wording (point 2, pp. 7–8).⁷

⁷ EC (2020). Standing Committee on Plants, Animals, Food and Feed Section Plant Health, 23–24 January. [sante.ddg2.g.5\(2020\)1059530](#). Brussels: European Commission, Health and Food Safety Directorate General.

- According to [ISPM 12](#), if the space provided in the phytosanitary certificate is not sufficient to insert all the necessary information (e.g. in the Additional Declaration), it is permitted to add an attachment. If you do so, it is very important to adhere to the following:
 - Each page of any attachment must bear the number of the phytosanitary certificate and be dated, signed and stamped in the same manner as required for the phytosanitary certificate itself.
 - You must state in the relevant section of the phytosanitary certificate if there is an attachment.
 - If an attachment has more than one page, the pages must be numbered, and the number of pages must be indicated on the phytosanitary certificate.



For fall armyworm (Implementing Decision (EC) 2019/1598)

Option (c)

If exporting countries are using Option (c) for a pest free production site (for example with eggplant grown in insect-proof screen houses), it is essential to include the following words in the phytosanitary certificate:

- in the Additional Declaration write: The consignment complies with the following conditions in accordance with Option (c) of Article 4 of Decision (EU) 2018/638:
 - i. the specified plants have been produced in a production site which is registered and supervised by the national plant protection organisation in the country of origin;
 - ii. official inspections have been carried out in the production site during the three months prior to export, and no presence of the specified organism has been detected on the specified plants;
 - iii. prior to their export, the specified plants have been subject to an official inspection and found free from the specified organism;
 - iv. information ensuring the traceability of the specified plants to their site of production has been ensured during their movement prior to export;
 - v. the specified plants have been produced in a production site which is provided with complete physical protection against the introduction of the specified organism.
- Information on traceability must be provided: in the phytosanitary certificate, alongside the description of the product, you must write the unique identification number or name of the approved production site from which the produce was sourced.

Option (d)

If exporting countries are using Option (d) for an effective treatment, it is essential to include the following words in the phytosanitary certificate:

- in the Treatment box/section write: “Systems approach”;
- in the Additional Declaration write: “The consignment complies with Option (d) of Article 4 of Decision (EU) 2018/638 and a systems approach for *Spodoptera frugiperda* has been applied”.

For tomato fruit borer (Implementing Regulation (EU) 2019/2072)

First, NPPOs must notify the European Commission that they are a country free from *Neoleucinodes elegantalis*. Once this is done and accepted, the following words must be included in the phytosanitary certificate:

- in the Additional Declaration, write: “The consignment complies with Option (a) of Article 68, annex VII of commission implementing regulation (EU) 2019/2072 and originates in a country recognised as being free from *Neoleucinodes elegantalis* (Guenée) in accordance with relevant International Standards for Phytosanitary Measures; this freedom status was communicated in writing to the Commission on dd/mm/yyyy.”

For tomato pinworm (Implementing Regulation (EU) 2019/2072)

First NPPOs must notify the European Commission that they are a country free from *Keiferia lycopersicella*. Once this is done and accepted, the following words must be included in the phytosanitary certificate:

- in the Additional Declaration, write: “The consignment complies with Option (a) of Article 69, annex VII of commission implementing regulation (EU) 2019/2072 and originates in a country recognised as being free from *Keiferia lycopersicella* (Walsingham), in accordance with relevant International Standards for Phytosanitary Measures; this freedom status was communicated in writing to the Commission on dd/mm/yyyy.”

For palm thrips (Implementing Regulation (EU) 2019/2072)

NPPOs must conduct an official inspection prior to export to verify that it is free from *Thrips palmi*.

- in the Additional Declaration, write: “The consignment complies with Option (c) of Article 70, annex VII of commission implementing regulation (EU) 2019/2072 and immediately prior to export, the consignment has been officially inspected and found to be free from *Thrips palmi* Karny.”



1.4. PEST FREE STATUS

International standards for phytosanitary measures (ISPMs) describe what needs to be done in order for an area, country, place of production or production site to be officially recognised as pest free. In each case the process must be led by the officially designated NPPO in each country, and it must follow closely the methodology outlined.

Establishing pest free area status requires data to be collected so that the presence or absence of the pest can be verified. Establishing pest free status needs to follow strictly the guidelines described in the relevant ISPM, and requires the NPPO (and its designated agents) to have the necessary training, resources and capabilities in data collection and pest risk analysis.

Pest free areas and countries

Pest free area or country status would be difficult to obtain in the case of fall armyworm as these pests are highly mobile and widely dispersed. This option would only be worth pursuing in areas that are geographically distinct or isolated from the main areas of pest distribution. Establishing and maintaining an area of low pest prevalence may be a possibility (where the capacity and resources are available nationally) and can be part of the systems approach.

In the case of tomato fruit borer, as this pest has not so far been found in Africa, Madagascar, Cape Verde or Mauritius, obtaining pest free country status is an option. Once pest free country status for *N. elegantalis* has been recognised by the EU, exports of the products concerned can continue without the need for any of the additional phytosanitary measures listed in the regulations.

Pest- or disease-free area:	An area in which a specific pest or disease does not occur. This can be an entire country; an uninfested part of a country in which a limited area is infested; or an uninfested part of a country within a generally infested area
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An area of low pest or disease prevalence:	An area, whether all of a country, part of a country, or all or parts of several countries (as identified by the competent authorities) in which a specific pest or disease occurs at low levels and is subject to effective surveillance, control or eradication measures
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There are three main stages to establish and maintain a pest free area:

- systems to establish freedom;
- phytosanitary measures to maintain freedom;
- checks to verify freedom has been maintained.

The work needed in each case varies according to factors such as the biology of the pest, the characteristics of the pest free area, and the level of phytosanitary security required.

The work involved in establishing and maintaining pest free area/country status is detailed and time consuming, and involves:

- data collection (pest surveys for delimiting, detection, monitoring);
- regulatory controls (protective measures against introduction into the country, including listing as a quarantine pest);
- audits (reviews and evaluation);
- documentation (reports, work plans).

The following documents and guides from IPPC/FAO provide further information:

- [ISPM 4](#) on requirements for establishing pest free areas;
- [Guide for Establishing and Maintaining Pest Free Areas](#) on requirements for pest free areas, pest free places of production, pest free production sites and areas of low pest prevalence;
- [ISPM 6](#) (Guidelines for surveillance) and [ISPM 2](#) (Framework for pest risk analysis) provide further details on general surveillance and specific survey requirements.

Pest free place of production and production site

Pest free place of production:	Place of production in which a pest is absent (demonstrated by scientific evidence) and generally maintained officially pest free for a defined period A place of production is “any premises or collection of fields operated as a single production or farming unit”.
Pest free production site:	Place of production in which a pest is absent (demonstrated by scientific evidence) and generally maintained officially pest free for a defined period A production site is “a defined part of a place of production, that is managed as a separate unit for phytosanitary purposes”.

Directives covering the regulated pests allow countries to export if the products have been produced in a “pest free place of production”. As noted above, some countries have adopted this option by using insect-proof screen houses.

Screen houses require significant investment in infrastructure, and are therefore out of reach of many smallholder farmers. However, where resources are available, this can be an effective option.

A place of production can only be designated as pest free by the NPPO. The NPPO and producers/exporters are required to conduct surveillance and inspections according to the international guidelines.

In addition to this, producers growing in screen houses must use an appropriate design of screen house so that it is insect proof, and ideally with an entry lobby. Strict biosecurity measures need to be in place when people or goods move in or out of the screen house to prevent pest entry.

The following documents and guides from IPPC/FAO provide further information:

- [ISPM 10](#) for the establishment of pest free places of production and pest free production sites.
- [Guide for Establishing and Maintaining Pest Free Areas](#) on requirements for pest free areas, pest free places of production, pest free production sites and areas of low pest prevalence.



PART 2

Guideline for preparing a national action plan

2.1 THE FALL ARMYWORM ACTION PLAN

On 26 September 2019, the EC published [Implementing Decision \(EU\) 2019/1598](#) introducing emergency measures covering fall armyworm. The aim is to prevent the introduction and spread of this noxious pest within the EU. It extends the geographical scope of an earlier [Directive \(EU 2018/638\)](#), which was limited to Africa and the Americas. These emergency measures apply from 1 October 2019 until 30 June 2021.

As noted in Part 1 of this document, COLEACP strongly recommends that horticultural export sectors affected by this regulation should prepare and implement a national action plan that specifies the measures to be taken by all stakeholders along the supply chain to manage fall armyworm in the products concerned; it is critical to ensure that there is no risk of it being present in export consignments.

Part 2 addresses the development of a national action plan to help the export sector meet Option (d) of Implementing Decision (EU) 2019/1598. This stipulates that the produce concerned must comply with the following conditions:

- they have been produced in a production site that is registered and supervised by the NPPO;
- official inspections have been carried out in the production site during the three months prior to export, and no fall armyworm has been detected;
- prior to export, the produce has been subject to an official inspection and found to be free from fall armyworm;
- there is full traceability covering all movements from the place of production to the point of export;

and

- they have been subjected to an effective treatment to ensure they are free from fall armyworm

The use of an effective treatment is the most accessible option for the majority of exporters. The Implementing Decision allows for the use of a systems approach.

A systems approach means developing an action plan that combines several different pest management measures that, used together, will significantly reduce pest risk. These measures may include surveillance, cultural practices, crop treatment, post-harvest disinfestation, inspection and others. The use of integrated measures in a systems approach for pest risk management is described in [ISPM 14](#).

This section has been prepared by COLEACP as a guide for national authorities and exporters of bitter tomato (*Solanum aethiopicum*), eggplant/aubergine (*Solanum melongena*) and local garden egg (*Solanum macrocarpon*) to help orient the development of a National Fall Armyworm Action Plan in the context of Implementing Decision (EU) 2019/1598. It provides a framework to guide the process and outlines the various elements that can be incorporated into a systems approach to manage fall armyworm (FAW). It identifies the information to be provided, and actions to be taken, at all stages from production to export, by both public and private sectors.

Note that the elements included here are not exhaustive. The national action plan could include all or a selection of these measures, as well as any others that may

be available and appropriate locally.

This guide covers the following sections that should be included in the national action plan:

- general information on the national export sector for bitter tomato, eggplant/aubergine and local garden egg;
- phytosanitary measures taken before, during and after harvest to prevent and control FAW;
- phytosanitary inspection and certification system;
- quality management system put in place by the NPPO to ensure that the national FAW national action plan is effectively implemented and monitored.

The systems approach

According to [ISPM 14](#), the characteristics of a systems approach are as follows:

- A systems approach requires two or more measures that are independent of each other, and may include any number of measures. An advantage of the systems approach is the ability to address (local) variability and uncertainty by modifying the number and strength of measures (needed) to meet phytosanitary import requirements.
- Measures used in a systems approach may be applied pre- and/or post-harvest wherever NPPOs have the ability to oversee and ensure compliance with phytosanitary procedures.
- A systems approach may include measures applied in the place of production, during the post-harvest period, at the packing house, or during shipment and distribution of the commodity.
- Risk management measures designed to prevent contamination or re-infestation are generally included (e.g. maintaining the integrity of lots, pest-proof packaging, screening of packing areas, etc.).
- Procedures such as pest surveillance, trapping and sampling can also be components of a systems approach.
- Measures that do not kill pests or reduce their prevalence, but reduce their potential for entry or establishment (safeguards), can be included in a systems approach. Examples include designated harvest or shipping periods; restrictions on the maturity, colour, hardness, or other condition of the commodity; the use of resistant hosts; and limited distribution or restricted use at the destination

Effective engagement between stakeholders

Experience has shown that engagement between public and private sector stakeholders is essential during development of the national action plan to ensure that it is adapted to the local context, and to secure the buy-in of all involved. The national action plan must be rigorously followed by all stakeholders in that country

involved in exports of bitter tomato, eggplant/aubergine and local garden egg to the EU. It is therefore very important that the national action plan is appropriate for the context, and is usable by the range of different producers and exporters concerned (large and small).

2.2. WHAT TO INCLUDE IN THE NATIONAL ACTION PLAN

2.2.1. Overview of the national citrus export sector

According to [ISPM 14](#), the following information is important for the evaluation of pest risk:

- The crop, place of production, expected volume and frequency of shipments.
- Production, harvesting, packaging/handling and transportation.
- The crop/pest dynamics.
- Plant health risk management measures that will be included in the systems approach, and relevant data on their efficacy.
- Relevant references.

Information on the national sector

Crop details:

- species and varieties of bitter tomato, eggplant/aubergine and local garden egg grown for export (scientific names and common names);
- characteristics of each species and variety;
- sensitivity or resistance to FAW;
- production zones:
 - describe and map the main production zones for export;
 - describe the production seasons (timeframe), by zone;
 - describe the climate in each production zone, assessed according to risk of pest infestation.

Production and export statistics for the past 2–3 years, specifying if possible:

- destination country;
- method of shipment (sea, air, land).

Presence and distribution of FAW in the country:

- geographical distribution and prevalence;
- period of infestation;
- other host plants in bitter tomato, eggplant/aubergine and local garden egg production areas.

2.2.2. Integrated pre- and post-harvest measures to prevent and control fruit fly/FCM

According to ISPM 14, the following pre- and post-harvest measures may be integrated into a systems approach:

- surveillance and monitoring (traps)
- treatment, including the use of plant protection products
- post-harvest disinfestation (e.g. cold treatment);
- inspection
- others.

Combined into an integrated management system, these measures will reduce the risk of any *Solanum* species exported to the EU being infested with FAW.

Measures at plantation level to monitor and control fruit fly/FCM

Pre-harvest

Growers producing for export to the EU should:

- **Apply good crop hygiene.**

Good field management and crop hygiene are critical to eliminate FAW adults and larvae in fallen fruit, and to remove injured fruit. In all production sites, growers must:

- remove all damaged and injured fruit, including fruit on the plants or on the ground;
- remove all dead or dying plants;
- destroy all crops and crop waste as soon as possible after harvest.

- **Conduct surveillance and monitoring.**

Surveillance is a major component of the integrated management of FAW:

- all production sites growing bitter tomato, eggplant/aubergine and local garden egg for export should undertake monitoring on a daily basis;
- the authorities should agree with industry the thresholds of intervention.

- **Agree the procedure to be followed by companies when there is an FAW alert**

Strict procedures should be maintained until the pest is under control and crops are certified FAW free by the NPPO. For example:

- quarantine all harvest from the infested site and initiate a product recall of fruit recently harvest in the vicinity;
- implement an eradication programme;
- apply cultural and chemical control;
- adhere to biosafety measures on the farm to eliminate pest transfer.

- **Implement cultural control of FAW to reduce pest incidence**

For example:

- rotate susceptible crops with non-susceptible or low risk crops;
- produce bitter tomato, eggplant/aubergine and local garden egg away from other host crops.

- **Control FAW using plant protection products:**

The national authorities should provide guidance on which products to use, and how to use them (including application method, dose rate, pre-harvest interval). These must be in accordance with the registration status in the country of origin, and the maximum residue level (MRL) of the active ingredient in the EU.

- **Receive up-to-date training.**

Growers and workers must be trained (and updated) in good practices relating to the identification, prevention, surveillance and control of FAW.

During harvest

Growers producing bitter tomato, eggplant/aubergine and local garden egg for export to the EU should:

- ensure that procedures are in place for sorting, isolating and disposing of all damaged fruit;

- ensure that handling and transport conditions are managed carefully to reduce the risk of FAW gaining access to harvested fruit;
- operate a traceability system that allows for the identification of plantations, and strict separation of harvest lots;
- ensure that all people involved in harvesting are trained so that they are aware of and apply good practices to reduce the risk of FAW attack; this includes good practices for prevention, control, crop hygiene and traceability.

Measures at the packhouse to prevent introduction, infestation and spread of FAW

On receiving the fruit, packhouse managers must:

- procedures in place to record the condition and phytosanitary status (pest presence) of the harvested produce when it arrives at the packhouse;
- a system in place to record all FAW control treatments applied pre- and post- harvest to each lot;
- a traceability system in place to ensure that each lot is identified and maintained separately through all post-harvest operations.

Measures post-harvest to monitor and control FAW

- Ensure that all operators involved in harvest and post-harvest activities can recognise FAW damage and know what to do when they find it.
- Have procedures in place in the field and packhouse to inspect for FAW presence and damage at all handling, packing and storage sites.
- Operate an FAW alert system, and put intervention and isolation procedures in place when infested fruit is identified.
- Maintain a system to keep records of packhouse inspections.
- Ensure practices and facilities are in place for the management of all crop waste, including pest-damaged fruit.
- Use refrigerated storage facilities where possible.
- Apply post-harvest treatments, when necessary, using plant protection products.
 - As in the case of field applications, the national authorities should be able to provide guidance on which products to use, and how to use them (e.g. application method, dose rate, pre-harvest interval).
 - These must be in accordance with the registration status in the country of origin, and the MRL of the active ingredient in the EU.
- Ensure that harvested fruit is never exposed to pest attack during packing, storage (including temporary storage), or transport (road, port or airport). This includes physical screening of transported consignments and packing areas to prevent pest entry. Use of pest-proof packaging is also an option.

- Train all people involved in post-harvest handling so they are aware of and apply good practices at all times to reduce the risk of pest damage.

2.2.3. Inspection and certification system

As noted in Part 1, there are specific actions that must be taken by the NPPO for all production sites that supply bitter tomato, eggplant/aubergine and local garden egg for export to the EU.

To recap, the NPPO must:

- register and supervise all production sites;
- carry out official inspections at all production sites during the three months prior to export – exports can only be permitted if no FAW has been detected at the production site;
- conduct an official inspection prior to export – exports can only be permitted if the produce is found to be free from FAW.

If there is a problem or interception, or if a country is subject to an audit by the EU authorities (DG Santé) at any stage, the national authorities in the exporting country must be able to provide all the necessary documentation to demonstrate that the correct registration, supervision and inspections have been conducted.

The NPPO must inspect all export consignments to ensure that there is full traceability covering all movements of the products concerned from the place of production to the point of export.

The following sections outline the administrative and regulatory frameworks that need to be in place for the effective functioning of the official control system and its enforcement by the NPPO.

Administrative and regulatory framework governing exports of bitter tomato, eggplant/aubergine and local garden egg to the EU

- There should be a system in place to register and identify all individual operators in the production and export chain (e.g. with a unique number).
- There should be a system for the identification and traceability of all production sites that supply for export to the EU.
- Authorities should conduct risk categorisation of exporters (high, medium and low risk).
- Authorities should conduct risk categorisation of exports (e.g. locations and seasons with higher pest pressure).

National system for monitoring fall armyworm populations

This includes:

- **Surveillance:**
Monitoring of FAW populations (using traps) in and near areas where these crops are grown for export. This needs to be accompanied by a system to compile and analyse the data.
- **Risk mitigation measures:**
According to the results of the monitoring, measures may need to be taken to reduce the risk of infested fruit entering the export supply chain.
- **Alert system:**
An alert system needs to be in place to inform stakeholders of any increased risk of FAW infestation, and any mitigation measures they must take.

Control and certification system

The NPPO (or its designated agents) must be active at all stages of the export value chain. This includes providing advice and training, as well as monitoring the implementation of plant health measures (that may include specific controls and certification). In brief:

- At the plantation level, the NPPO provides advice and training to private sector operators on crop production, and on the monitoring and control of FAW. They should oversee and ensure the application of good practice.
- At the packhouse level, the NPPO controls infrastructure and packing conditions. Training of private sector operators will be provided in identification of FAW presence and damage, and crop waste management, among others.
- At the point of export (ports, airports, road borders), procedures are in place, and implemented effectively, for the inspection of produce, issuing of plant health certificates, and preparation of all necessary documentation.

Action by the NPPO at producer level

Action to be taken by the NPPO at producer level in bitter tomato, eggplant/aubergine and local garden egg for export to the EU:

- confirming exporter registration;
- checking traceability of all plantations that supply these crops for export;
- assessing and documenting the application of good practice by producers, covering:
 - cropping practices
 - crop hygiene and crop waste management
 - FAW monitoring system using approved traps

- implementation of FAW control
- others;
- system to verify the training of operators in good practices for the prevention and control of FAW.

Action by the NPPO at packhouses

Action to be taken by the NPPO at all packhouses supplying bitter tomato, eggplant/aubergine and local garden egg for export to the EU.

Conduct an assessment of:

- premises and equipment, to ensure the prevention of FAW entry and spread;
- implementation of good hygiene practices, and measures to prevent the risk of FAW infestation;
- implementation of inspection/monitoring by packhouse personnel at all handling and storage sites to check for FAW;
- effectiveness of sorting and isolation systems, and the suitability of infrastructure, to deal with produce that shows FAW presence and damage;
- facilities and procedures for disposal of damaged fruit and waste;
- effectiveness and implementation of the traceability system;
- effectiveness of the system in place for the isolation of lots;
- frequency and effectiveness of staff training.

Issuing of phytosanitary certificates

The NPPO must operate a system of controls and certification according to the method of shipment. This must address:

- implementation of document checks;
- physical inspection;
- identity checks;
- sampling method;
- the NPPO must have in place a system for tracking and archiving inspection data;
- the NPPO must have a system for tracking and archiving phytosanitary certificates.

2.2.4. NPPO quality management system

According to ISPM 14, the exporting country authorities are responsible for:

- monitoring, auditing and reporting on the effectiveness of the system;
- taking appropriate corrective measures;
- keeping the relevant documentation up-to-date;
- use of phytosanitary certificates in accordance with requirements.

Internal audit

This should describe the monitoring and internal audit system in place to ensure the effective implementation of the plant health inspection and certification system, including:

- training of NPPO managers and technical personnel (inspectors, enforcement officers);
- designing and implementing effective procedures for the inspection of production sites and packhouses.

Management of interceptions/notifications

This should describe the system in place for tracking notifications and communicating with stakeholders, including:

- statistics on FAW notifications;
- information on processing, tracking and communicating official notifications.

2.2.5 Summary and recommendations

Countries exporting bitter tomato, eggplant/aubergine and local garden egg should implement a national action plan that will ensure all produce exported to the EU is free from FAW.

The national action plan must be followed by all stakeholders involved in the export sector including growers, private operators, and the NPPO.

It is essential that the NPPO works hand-in-hand with the private sector to develop the national action plan, and subsequently to ensure that it is implemented effectively.

- If private sector operators are not involved in developing the action plan, and the NPPO does not secure their buy-in (agreement), it is less likely that they will understand its importance and implement it effectively.
- Feedback from the private sector is essential to ensure that the action plan is adapted to local conditions, and is appropriate for, and can be used by, the range of different producers and exporters concerned (large and small).

The following steps are recommended for the preparation and submission of the dossier.

Step 1: Setting up a Technical Working Group

The Technical Working Group will bring together stakeholders (private and public sector) to consider and agree the elements that should be included in the national FAW action plan.

The group can be convened by the NPPO. The composition of the group may vary according to the local industry and public authorities. As a general rule, a small group will be more effective than a large one. As a minimum, it is important to ensure that the membership:

- includes representatives of the NPPO with sound knowledge and experience in the relevant phytosanitary controls and enforcement;
- is acceptable to organisations representing the private sector;
- is representative of the bitter melon, eggplant/aubergine and local garden egg export sector, including both large- and small-scale operators who have a sound knowledge of production and export;
- includes representatives with strong scientific and technical expertise, which will be essential to document the phytosanitary measures that will be included in a clear and precise manner.

This COLEACP guide can be used to provide a framework for the national action plan. The content of each section can be adapted and customised according to local circumstances.

Validating the national action plan with stakeholders

Consultation with the key public and private stakeholders is essential to ensure that the action plan is fit for purpose, locally appropriate, and accepted by all the major stakeholders who will be involved in implementing it.

This consultation will give the wider industry a chance to obtain clarification and to recommend changes. The aim is to use feedback from the consultation to develop a final version of the action plan that is approved and recognised by all.

If resources are available, consultation is best achieved through the organisation of a national workshop where the action plan can be presented to and discussed with a large group. If this is not possible, the draft may be presented to smaller meetings/groups, or circulated via industry associations or other representative bodies.

BIBLIOGRAPHY

- Andermatt Biological (2019). PheroNorm.
www.andermttbioccontrol.com/sites/products/monitoring-systems/pheronorm.html
- Corteva (2019a). Delegate 250 WG label (a.i. spinetoram).
www.corteva.co.za/label-finder.html
- EU (n.d.). MRL database.
<https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=pesticide.residue.selection&language=EN>
- Europhyt (2020). Interceptions of harmful organisms in imported plants and other objects. Brussels: European Commission.
https://ec.europa.eu/food/plant/plant_health_biosecurity/europhyt/interceptions_en
- FAO (2008) Methodologies for sampling of consignments. International Standards for Phytosanitary Measures (ISPM 31). www.ippc.int/en/publications/83473/
- FAO (2017). The use of integrated measures in a systems approach for pest risk management. International Standards for Phytosanitary Measures (ISPM 14). www.fao.org/3/a-y4221e.pdf
- FAO (2017). Guidelines for a phytosanitary import regulatory system. International Standards for Phytosanitary Measures (ISPM 20). www.fao.org/3/a-y5721e.pdf
- Fening, K.O., Billah, M.K. and Kukiriza, C.N.M. (2017). *Roadmap for Pest Reduction in Ghana's Export Vegetable Sector*. GhanaVeg Sector Reports, GhanaVeg.
<http://docplayer.net/80364213-Ghanaveg-sector-reports-roadmap-for-pest-reduction-in-ghana-s-export-vegetable-sector.html>
- Fritsch, E. (1988). Biologische Bekämpfung des Falschen Apfelwicklers, *Cryptophlebia leucotreta* (Meyrick) (Lep., Tortricidae), mit Granuloseviren. *Mitteilungen der Deutschen Gesellschaft für Allgemeine und Angewandte Entomologie*, 6: 280–283.
- Martin, T., Assogba-Komlan, F., Houndete, T., Hougard, J.M. and Chandre, F. (2006). Efficacy of mosquito netting for sustainable small holders' cabbage production in Africa. *Journal of Economic Entomology*, 99: 450–454.
- Whyte, C. (2009). Explanatory Document on International Standard for Phytosanitary Measures No. 31. (Methodologies for Sampling of Consignments). www.ippc.int/en/publications/43/



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