**Proposal for a commodity standard for fresh fruit of *Malus domestica* (apples) – further justification by EPPO**

**Background**

Several ISPMs (e.g. on pest risk analysis (PRA) and pest free areas (PFA)) provide relevant guidance for the phytosanitary aspects for the international movement of commodities and several commodity class standards are under development. Currently, however, no ISPMs focus specifically on phytosanitary measures for the international movement of a single commodity.

The Commission on Phytosanitary Measures (CPM) set up a working group in 2015[[1]](#footnote-1) to explore the concept of a commodity standard and this was discussed at CPM-11 in 2016. The EU proposed that a commodity standard should be developed as a case study to explore issues involved in the development of such standards[[2]](#footnote-2).

The CPM agreed that a standard should not be tagged as a particular type, but should focus on requirements or guidance that need to be harmonised in order to effectively manage the phytosanitary risks that the standard is intended to cover as defined in its scope. The CPM did not specifically agree to the proposal by the EU for a case study to develop a commodity standard, but requested that the Standards Committee (SC) reconsider the topic on PRA for Commodities and the other proposals for commodity standards that were made during the 2015 call for topics.

In the 2015 call for topics, EPPO proposed two topics for commodity standards (tomatoes and apples). In this paper we propose that the SC considers recommending developing a commodity standard for fresh fruit of *Malus domestica* (apples). The process of development of the standard could provide valuable experience with developing commodity standards and could be in place of or in parallel to an overarching standard on the concept of commodity standards.

**Need to develop commodity standards**

In 2015, when considering the IPPC in 20 years the Strategic Planning Group identified theme 7: *Simplify the regulatory environment for the complexities of future global trade* (see document 08\_SPG\_2015\_Oct[[3]](#footnote-3))). The development of commodity standards should be considered part of the process of simplification and harmonisation.

The lack of harmonized approaches for managing pest risks associated with commodities means that, based on individual PRAs, multiple requirements are being developed by contracting parties to manage pest risks. Trading partners also develop guidelines and quality specifications, including grade standards, for the international movement of commodities and Codex has produced quality standards for international trade in commodities (e.g. standard for fresh apple fruit, CODEX STAN 299-2010). While many of these address quality and/or food safety, some may also have a significant effect on mitigating pest risks.

Both exporting and importing countries may benefit from guidance on pest risk factors related to commodities as pathways for quarantine pests and on technically justified phytosanitary measures to manage pest risks. Phytosanitary measures applied before export, during transport, on arrival, and during handling and processing in the importing country can be effective in pest risk mitigation and thereby help to improve food security and the conservation and sustainable use of biodiversity, but international guidance is needed to support that such measures are technically justified, commensurate with the level of risk, and not more restrictive to trade than required.

For exporting countries, simplification of requirements would mean that NPPOs could work more efficiently. Clarification of requirements and the provision of options for managing regulated pests could also help to reduce the burden to industry. Simplified requirements will be beneficial for producers and exporters and ensure that they do not have to work to the multitude of differing requirements that currently apply.

By making available options that meet required levels of protection in commodity standards, the PRA processes could be simplified for importing countries and this could facilitate safe trade. Contracting parties would need to have confidence that measures in such standards are sufficiently effective to meet their requirements, but the standard setting process ensures that there is sufficient opportunity for scrutiny of requirements.

Various approaches could be taken to simplify requirements, for example identification of measures that are applicable to groups of pests with similar biological properties, agreement on harmonised requirements for a specific pest or agreement that measures are not required for pests that are widespread across the globe. Commodity standards could also evolve, for example CPM could adopt additional measures into a commodity standard after considering supporting evidence.

**Why apples?**

Apples are traded globally as a fresh perishable commodity. They are imported for consumption or for processing. The trade is well developed and in many cases uses sophisticated infrastructure to maintain fruit quality and shelf life. The standard should apply to commercial consignments and should not apply to processed (chopped, cooked, dried) apples.

From FAO statistics, in 2013 more than 135 countries imported 1000 tonnes or more. Total global imports amounted to more than 8M tonnes with a value of more than US$8 billion (more detailed figures are given in Annex 1).

Apples are an important export commodity for many countries. For example, in 2013 62 countries exported at least 1000 tonnes. Globally more than 8.5 million tonnes were exported, with countries from Africa, Asia, Europe, Latin America and SW Pacific in the top ten exporting countries, both by volume and value. The global value of exports was more than US $8 billion.

Apples have been the subject of three WTO plant health disputes. Two (by the USA with Japan <https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds245_e.htm> and by New Zealand with Australia <https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds367_e.htm>)related to measures for *Erwinia amylovora* (fireblight). The third applied to measures for fruit, including apples (https://www.wto.org/english/tratop\_e/dispu\_e/cases\_e/ds76\_e.htm).

Apples can be affected by a large number of pests and, based on PRA, countries have specified a wide variety of phytosanitary measures in their phytosanitary regulations (some examples are given in Annex 2). Phytosanitary measures applied to the international movement of apples help reduce the risk of introduction and spread of quarantine pests into new geographical areas. These measures should be technically justified and not more restrictive to trade than required.

There has been considerable work within the European region to identify pests of apple fruit and control measures. This expertise could be used in development of the draft standard.

**Measures for individual pests or pest groups**

In addition to providing guidance on pests affecting apples, if appropriate the standard should include specific requirements that apply to all international movements of apples, for example a requirement for consignments to be free from plant debris and soil.

The standard should also provide standardised options for management of major globally relevant pests, for example specific measures for *E. amylovora* or *Bactrocera dorsalis.* For other pests, there would be options that would be applicable for pest groups, for example moths, weevils, beetles, rots or leaf spots.

**Conclusion**

This standard for apples should help to minimise risks from international trade in apple fruit by clarifying and simplifying arrangements in importing and exporting countries. The standard should also help prevent further disputes.

**Annex 1**

**2013 trade figures from FAO stats**

**Export quantities**

Global export volumes were 8,584,796 tonnes (<http://faostat3.fao.org/browse/T/TP/E>)

62 countries exported 1000 or more tonnes of apples.

Top 20 exporting countries by quantity

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Country** | **Export quantity (tonnes)** | **Export value (1000 US$)** |
| 1 | Poland | 1,205,248 | 578,745 |
| 2 | China | 1,034,924 | 1,077,785 |
| 3 | Chile | 833,251 | 843,324 |
| 4 | Italy | 788,021 | 934,245 |
| 5 | France | 543,164 | 650,208 |
| 6 | South Africa | 482,435 | 444,843 |
| 7 | New Zealand | 322,136 | 406,577 |
| 8 | Netherlands | 273,033 | 415,159 |
| 9 | Belgium | 202,206 | 209,708 |
| 10 | Republic of Moldova | 194,286 | 47,557 |
| 11 | Argentina | 163,598 | 157,394 |
| 12 | Turkey | 125,682 | 48,951 |
| 13 | Belarus | 117,867 | 50,855 |
| 14 | Serbia | 115,938 | 53,025 |
| 15 | Spain | 112,870 | 104,081 |
| 16 | Germany | 95,218 | 98,700 |
| 17 | Austria | 85,710 | 88,147 |
| 18 | Brazil | 85,429 | 62,942 |
| 19 | The former Yugoslav Republic of Macedonia | 77,070 | 17,208 |
| 20 | Lebanon | 71,483 | 14,847 |

**Export values**

Global export value in 2013 was more than US $8 billion ($8,028,152 x 1000)

Top 20 exporting countries by value in 2013

|  |  |  |
| --- | --- | --- |
|  | **Country** | **Export value (1000 US$)** |
| 1 | China | 1,077,785 |
| 2 | Italy | 934,245 |
| 3 | Chile | 843,324 |
| 4 | France | 650,208 |
| 5 | Poland | 578,745 |
| 6 | South Africa | 444,843 |
| 7 | Netherlands | 415,159 |
| 8 | New Zealand | 406,577 |
| 9 | Belgium | 209,708 |
| 10 | Argentina | 157,394 |
| 11 | Spain | 104,081 |
| 12 | Germany | 98,700 |
| 13 | Syrian Arab Republic | 88,512 |
| 14 | Austria | 88147 |
| 15 | Japan | 73,463 |
| 16 | Brazil | 62,942 |
| 17 | Serbia | 53,025 |
| 18 | Lithuania | 51,645 |
| 19 | Belarus | 50,855 |
| 20 | Turkey | 48,951 |

**Imports**

Globally, more than 8M tonnes were imported (8,613,231 tonnes).

Approx. 137 countries imported 1000 or more tonnes of apples.

Trade dynamics may have changed significantly since 2013, due to Russian ban on EU imports.

Top 20 importing countries by quantity in 2013

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Country** | **Import quantity (tonnes)** | **Import value (1000 US$)** |
| 1 | Russian Federation | 1,352,347 | 789,444 |
| 2 | Germany | 658,442 | 685,258 |
| 3 | United Kingdom | 479,667 | 610,139 |
| 4 | Netherlands | 330,991 | 453,481 |
| 5 | China | 300,995 | 405,073 |
| 6 | Mexico | 274,978 | 344,048 |
| 7 | Spain | 240,068 | 272,611 |
| 8 | France | 239,386 | 237,608 |
| 9 | Canada | 233,575 | 277,937 |
| 10 | United States of America | 198,746 | 262,179 |
| 11 | India | 194,335 | 211,296 |
| 12 | Saudi Arabia | 189,295 | 188,523 |
| 13 | Belarus | 180,494 | 86,408 |
| 14 | United Arab Emirates | 172,726 | 230,548 |
| 15 | Egypt | 160,712 | 193,581 |
| 16 | Belgium | 160,491 | 188,759 |
| 17 | Bangladesh | 145,714 | 107,563 |
| 18 | Thailand | 144,164 | 185,198 |
| 19 | Indonesia | 129,932 | 175,649 |
| 20 | Kazakhstan | 127,600 | 64,111 |

Value of imports more than 8 billion US$ (8,476,782) globally.

Top 20 importing countries by value in 2013

|  |  |  |
| --- | --- | --- |
|  | **Country** | **Import value (1000 US$)** |
| 1 | Russian Federation | 789,444 |
| 2 | Germany | 685,258 |
| 3 | United Kingdom | 610,139 |
| 4 | Netherlands | 453,481 |
| 5 | China | 405,073 |
| 6 | Mexico | 344,048 |
| 7 | Canada | 277,937 |
| 8 | Spain | 272,611 |
| 9 | United States of America | 262,179 |
| 10 | France | 237,608 |
| 11 | United Arab Emirates | 230,548 |
| 12 | India | 211,296 |
| 13 | Egypt | 193,581 |
| 14 | Belgium | 188,759 |
| 15 | Saudi Arabia | 188,523 |
| 16 | Thailand | 185,198 |
| 17 | Indonesia | 175,649 |
| 18 | Viet Nam | 153,704 |
| 19 | Sweden | 127,631 |
| 20 | Colombia | 111,990 |

**Annex 2**

**Examples of measures used or proposed by a few different countries for imports of apples**

|  |  |  |
| --- | --- | --- |
| **Importing Country** | **Regulated pests** | **Requirements** |
| **Australia**  Draft Import Risk Analysis Report for Fresh Apple Fruit to Australia from the **United States of America Pacific Northwest States** (2009) [[4]](#footnote-4) | Arthropods:  *Cenopalpus pulcher*, *Phenacoccus aceris* EP, *Pseudococcus maritimus* EP, *Frankliniella occidentalis* EP, *Frankliniella tritici*  EP*: Species has been assessed previously and for which import policy already exists* | Visual inspection and remedial action1 (600-apple inspection with remedial action if arthropods are found)  1 *Remedial action (depending on the location of the inspection) may include: treatment of the consignment to ensure that the pest is no longer viable; withdrawing the consignment from export to Australia; re-export of the consignment from Australia; or destruction of the consignment* |
|  | *Archips argyrospila*, *Archips podana*, *Archips rosana*, *Argyrotaenia franciscana*, *Choristoneura rosaceana*, *Hedya nubiferana*, *Pandemis heparana*, *Pandemis pyrusana,* *Spilonota ocellana* | Visual inspection and remedial action1 (This may involve examination of a 600 cut fruit sample during the initial trade with remedial action if leafroller moths are found. Based on the results from the fruit cutting the need for fruit cutting in future seasons will be reviewed.) |
|  | *Dasineura mali* EP | Option 1: Pest free areas or pest free places of production or production sites (ISPM 4, 10)  Option 2: Visual inspection and remedial action (3000-apple inspection with remedial action if ALCM is found)  Option 3: Treatment (e.g. methyl bromide fumigation) of all export lots |
|  | *Rhagoletis pomonella* | Option 1: Pest free areas or pest free places of production or production sites (ISPM 4, 10)  Option 2: Treatment (e.g. methyl bromide fumigation) of all export lots |
|  | *Cydia pomonella* WA, EP, *Grapholita molesta*WA, *Grapholita packardi*, *Grapholita prunivora*  WA*: Quarantine pest for state of Western Australia* | Option 1: Areas of low pest prevalence (ISPM 22)  Option 2: Treatment (e.g. methyl bromide fumigation) of all export lots |
|  | Pathogens:  *Erwinia amylovora* EP | Areas free from disease symptoms (ISPM 4,10,22) and disinfection with chlorine solution |
|  | *Coprinopsis psychromorbida*, *Mucor mucedo*, *Mucor piriformis*WA, *Mucor racemosus*WA | Systems approach   * Orchard control * Orchard and packing house sanitation practices, including disinfection with chlorine solution * Visual inspection and remedial action |
|  | *Sphaeropsis pyriputrescens*, *Phacidiopycnis piri*, *Phacidiopycnis washingtonensis* | These pathogens are the causes of recently reported post-harvest diseases and there is no published data on effective control measures. BA will consult the US to propose measures, with supporting data, for review. |
|  | *Neonectria ditissima*EP | Option 1: Pest free areas (ISPM 4)  Option 2: Pest free places of production (ISPM 10)  Option 3: Areas of low pest prevalence (ISPM 22) |
|  | *Phyllosticta arbutifolia*, *Gymnosporangium juniperi-virginianae*, *Gymnosporangium libocedri* | Systems approach   * Orchard control and surveillance * Visual inspection and remedial action |
|  | *Venturia inaequalis*WA, EP | Option 1: Pest free areas (ISPM 4)  Option 2: Pest free places of production (ISPM 10) |
|  | *Truncatella hartigii* | BA will consult the US to propose measures, with supporting data, for review. |
|  | *Pseudomonas syringae* pv. *papulans*, *Lopholeucaspis japonica*, *Parlatoria oleae*WA, *Pseudococcus calceolariae*WA, EP, *Pseudococcus comstocki* EP, *Argyrotaenia velutinana*, *Platynota flavedana*, *Platynota idaeusalis*, *Platynota stultana*, *Pseudexentera mali*, *Ostrinia nubilalia*, Sooty blotch and flyspeck fungi, Sooty blotch and flyspeck complex | APHIS to provide, prior to each year of trade, a declaration that these pests are still not present in the PNW. |
| **Canada**  Requirements for temperate fruits to Canada (2009) from Argentina, Chile, Netherlands, South Africa. Also from Mexico and Continental US to all provinces other than BC[[5]](#footnote-5) | Invertebrates: *Cydia pomonella*, *Epiphyas postvittana*, *Grapholita molesta*, *Leucoptera malifoliella* (= *L. scitella*), *Lobesia botrana*, *Otiorhynchus* spp., *Popillia japonica*, *Rhagoletis mendax*, *Rhagoletis pomonella*, *Teia anartoides* (= *Orgyia anartoides*)  Fungi: *Alternaria kikuchiana* (= *A. gaisen*), *Coniella diplodiella*, *Guignardia baccae*, *Monilia fructigena*, *Phomopsis viticola*  Mites: *Amphitetranychus viennensis*, *Tetranychus truncatus* | Free from pests, soil, leaves, branches, and other plant debris |
| As above – for other countries | As above | As above, plus specific requirements for imports from:  Australia – Fumigation and cold; *Epiphyas postvittana* measures.  Brazil – allowed apart from into British Columbia (BC)  France, Italy, Portugal, Spain – inspection 14 days prior to export for freedom from living stages of *Leucoptera malifoliella*.  Japan - Bagging or Fumigation etc…  New Zealand – inspection for freedom from all living stages of *Epiphyas postvittana*  China – specific requirements for BC, for other provinces bagging or specific programmes  Poland – systems approach and inspection for found freedom from all life stages of any pests regulated by Canada  Korea – similar to China  Uruguay – other than BC – no measures, BC pest management program for freedom from *Grapholita molesta* or treatment. |
| **Canada**  Proposed measures for entry to British Columbia PFA, Canada from US and Mexico (1 June 2016)[[6]](#footnote-6) | *Rhagoletis pomonella*  Plus requirements for *Grapholita molesta*, *Epiphyas postvittana*, viruses, regulated soil borne pests. | Mexico:  Cold treatment of fruit  Treatment of empty containers  US:  Cold treatment  Pest free county or  USDA approved PFPS |
| **South Africa**  Requirements for apples to South Africa from China (2007)[[7]](#footnote-7) | *Amphitetranychus viennensis, Adoxophyes orana \*, Bactrocera dorsalis, Carposina sasakii \*, Conogethes punctiferalis \*, Cydia funebrana \*, Grapholita inopinata \*, Leucoptera malifoliella, Lopholeucaspis japonica, Pseudococcus comstocki* | Bagging of fruit  *Bactrocera dorsalis* PFA  Post-harvest Inspection 600 fruit per lot (more than 1000), 450 fruit for lots of up to1000.  Import inspection  Findings of *Grapholita inopinata, Carposina sasakii,*  *Adoxophyes orana, Conogethes punctiferali, Cydia funebrana* – result in trade being suspended pending investigation  Findings of *Diaspidiotus ostreaeformis, Parlatoria oleae*, *Spilonota ocellana* - SA to take measures and investigation initiated.  Findings of *Monilinia fructicola, Rhynchites heros* - consultation |
| **USA**  Import of apples and pears to USA from Europe (proposed 2016, commenting allowed until May 2016)[[8]](#footnote-8)  (Currently USA allow imports from Belgium, France, Great Britain, Italy, the Netherlands, Portugal, and Spain under a preclearance programme involving orchard and packinghouse inspections for *Leucoptera malifoliella* and other quarantine plant pests; approved mitigations for infested orchards; cold treatment of fruit against *Ceratitis capitata* in countries where the pest is known to occur; identification of orchards and packinghouses for traceback of each consignment; packinghouse handling and safeguarding requirements for fruit intended for shipment to the USA; and preclearance inspection ). | Invertebrates: *Adoxophyes orana, Aphanostigma piri, Archips podana, Argyrotaenia pulchellana, Ceratitis capitata, Ceroplastes japonicas, Choristoneura hebenstreitella, Cryptoblabes gnidiella, Cydia pyrivora, Diloba caeruleocephala, Eutetranychus orientalis, Euzophera bigella, Grapholita funebrana, Grapholita lobarzewskii, Hedya pruniana, Lacanobia oleracea, Leucoptera malifoliella, Lobesia botrana, Mamestra brassicae, Pammene rhediella, Pandemis cerasana, Pandemis heparana, Rhynchites aequatus, Rhynchites auratus, Rhynchites bacchus, Syndemis musculana,*  Bacteria: *Erwinia pyrifoliae*  Fungi: *Alternaria gaisen, Ascochyta pyricola, Monilinia fructigena, Monilinia polystromam*  Viroid: *Pear blister canker viroid* | This proposal is for import of apples and pears from Belgium, Germany, France, Italy, Poland, Portugal, Spain, and the Netherlands using a systems approach. (Additional to existing arrangements.)  Measures:  1. NPPO operational workplan detailing monitoring, pest action thresholds, orchard phytosanitary measures including removing fallen fruit, packinghouse inspection procedures, and traceback requirements  2. Restricted to commercial consignments  3. Production site registration, monitoring for QPs and applying control programmes  4. Two growing season inspections for QPs by NPPO or authorised officers  5. measures at packhouses including pest mitigation, fruit sampling, inspection, and other measures  6. registered packhouses that exclude plant pests and have a tracking system to identify individual production sites  7. When packing, it should be solely for USA, removal of leaves.  8. Safeguards during transfer and shipment e.g. tarpaulins, screens, double doors.  9. Store separately from consignments from other countries.  10. Cold treatment for medfly  11. Inspection by NPPO of exporting country |

Other requirements, not summarised include: **China** from South Africa (2014): <http://www.nda.agric.za/doaDev/sideMenu/plantHealth/docs/Protocol%20for%20export%20of%20apple%20from%20South%20Africa%20to%20China.pdf>

1. <https://www.ippc.int/static/media/files/publication/en/2015/09/REPORT_WGCommodityStandard_2015_July_2015-09-24.pdf> [↑](#footnote-ref-1)
2. <https://www.ippc.int/static/media/files/publication/en/2016/03/INF_17_CPM_April_2016_written-statements-EU28_2016-03-23.pdf> [↑](#footnote-ref-2)
3. <https://www.ippc.int/en/publications/81573/> [↑](#footnote-ref-3)
4. <http://www.agriculture.gov.au/SiteCollectionDocuments/ba/plant/ungroupeddocs/2009-26_BAA__Draft_US_Apples_IRA.pdf> [↑](#footnote-ref-4)
5. <http://www.inspection.gc.ca/plants/plant-pests-invasive-species/directives/date/d-95-08/eng/1322413085880/1322413348292#b4> [↑](#footnote-ref-5)
6. <http://www.inspection.gc.ca/plants/plant-pests-invasive-species/directives/horticulture/d-00-07/eng/1323819375916/1323819810662> [↑](#footnote-ref-6)
7. <http://www.nda.agric.za/doaDev/sideMenu/plantHealth/docs/Protocol_%20import_apple_China-SA.pdf> [↑](#footnote-ref-7)
8. <https://www.regulations.gov/#!documentDetail;D=APHIS-2015-0073-0001> [↑](#footnote-ref-8)