Import Health Standard
Commodity sub-class: Fresh fruit/vegetables

Mangoes
(Mangifera indica)
from Viet Nam

ISSUED

Issuance: xx xxxx 2011
Issuance

This import health standard for fresh mango fruit from Viet Nam has been issued pursuant to section 22 of the Biosecurity Act (1993).

______________________________________________________________

Signature of Group Manager, Plant Imports & Export Group
Acting pursuant to delegated Director-General authority

Date: DD Month YYYY
IMPORT HEALTH STANDARD: FRESH FRUIT/VEGETABLES
Mango (*Mangifera indica*) from Viet Nam

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Part A. Background

Scope

This import health standard describes the requirements to be met to enable biosecurity clearance to be given for fresh mango fruit (*Mangifera indica* L.) for human consumption imported into New Zealand from Viet Nam. The commodity description “mango” for human consumption is defined as commercially-produced mango fruits with skin, flesh and seed, with a small portion of stem attached but not including leaves.

Definitions

The definitions of relevant phytosanitary terms used in this standard are consistent with the terms stated in the *International Standards for Phytosanitary Measures No. 5*, produced by the International Plant Protection Convention (IPPC), unless the context otherwise requires or the definition is stated below.

*Import health standard* means a document issued pursuant to section 22 of the Biosecurity Act 1993 on behalf of the Director General permitting entry to New Zealand of a specific product under certain conditions.

*MAF Import and Export Standards* means the section within the Ministry of Agriculture and Forestry which is responsible for regulatory biosecurity functions.

*Maximum allowable prevalence* means the level of infestation that is the threshold, above which phytosanitary actions based on inspection would be applied.

*Unit* means one mango fruit.

*Regulated organisms* means those organisms for which phytosanitary actions would be undertaken if they were intercepted/detected.

Outcome

The agreed pre-shipment or in-transit measures for high risk regulated organisms have been undertaken and the mangoes are free of regulated organisms.

Performance measure

The high risk regulated organisms as in *Part C* require specific risk mitigation measures.

The Maximum Allowable Prevalence for visually detectable regulated organisms on fresh fruit/vegetables is as follows: At a 95% confidence level, not more than 0.5% of the units in the consignment are infested (this equates to an acceptance level of zero units infested by regulated organisms in a sample size of 600 units).
Equivalence
Under section 22 of the Biosecurity Act 1993, MAF can amend the relevant IHS by adding an approved equivalent measure; once that measure is proven to maintain at least the same level of protection assured by the measures in this IHS. Equivalence is determined by MAF in accordance with ISPM No.24: Guidance for the determination and recognition of equivalence of phytosanitary measures (2005). See the associated guidance document on how to apply for equivalence, if necessary.

Part B. General import requirements for all fresh fruit/vegetables for consumption
The import health standard 152.02 (IHS152.02: Importation and Clearance of Fresh Fruit and Vegetables into New Zealand) contains the phytosanitary requirements that must be met for all fresh fruit and vegetable commodities that are allowed to be imported into New Zealand. The IHS 152.02 outlines transit requirements, inspections on arrival in New Zealand and actions undertaken upon organism interceptions.

The import health standard 152.02 can be found at the MAF website (http://www.biosecurity.govt.nz/files/ihs/152-02.pdf).

Part C. Additional requirements for mangoes from Viet Nam
Phytosanitary measures
All mango fruit for export to New Zealand must be sourced from orchards that produce commercial mangoes under standard cultivation, pest-control, harvesting and packing activities. During harvest, infested, infected or damaged fruit must be discarded prior to treatment.

MAF requires a mandatory pre-export treatment of mangoes for high risk regulated organisms, including economically important fruit fly species. MAF currently approves vapour heat treatment at fruit pulp temperatures at or above 46.5°C for at least 30 minutes or irradiation at a minimum absorbed dose of 400 Gy as a treatment for regulated arthropod pests associated with mangoes from Viet Nam.

The application of vapour heat treatment or irradiation must be in accordance with the Official Assurance Programme agreed between Viet Nam’s NPPO and MAF. In addition, the application of the irradiation treatment must be carried out in accordance with the International Standards for Phytosanitary Measures publication No.18 Guidelines for the use of irradiation as a phytosanitary measure.

Inspection of the consignment
Once the phytosanitary measures have been undertaken for the high risk regulated organisms, the Viet Nam NPPO is required to sample and visually inspect the consignment according to official procedures for all the regulated organisms specified in the regulated organism list (Part E) to ensure it conforms with New Zealand’s current import requirements.
A phytosanitary certificate should not be issued if live regulated organism(s) are detected, unless the consignment is effectively treated. If organisms are found which are not listed in the import health standard, the Viet Nam NPPO must establish their regulatory status. This list of actionable regulated organisms is available in MAF’s “Biosecurity Organisms Register for Imported Commodities” (BORIC), online at [http://www.biosecurity.govt.nz/pests/registers/boric](http://www.biosecurity.govt.nz/pests/registers/boric).

If an organism found during export inspection by the Viet Nam NPPO is not listed in BORIC, the Viet Nam NPPO must contact MAF to establish the regulatory status of the organism.

**Part D. Phytosanitary certification**

A completed phytosanitary certificate issued by Viet Nam’s NPPO must accompany all mango consignments exported to New Zealand. The phytosanitary certificate must be in English and an original. Bilingual certificates are acceptable as long as English is one of the languages.

Before a phytosanitary certificate is issued, Viet Nam’s NPPO must be satisfied that the following activities required by MAF have been undertaken.

The mangoes have:

1. been inspected in accordance with appropriate official procedures and found free from regulated organisms.
2. undergone treatment that is effective against regulated arthropod pests in accordance with terms of the Official Assurance Programme agreed between MAF and the Ministry of Agriculture and Rural Development (MARD) of Viet Nam.

**Additional declarations to the phytosanitary certificate**

If satisfied that the pre-shipment activities have been undertaken, Viet Nam’s NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:

A. For mangoes that have undergone treatment by irradiation at 400 Gy the additional declarations required are:

   The mangoes in this consignment have:

   1. been visually inspected in accordance with appropriate official procedures and found free from regulated plant pathogens.
(iii) been produced in accordance with terms of the Official Assurance Programme agreed between MAF and the Ministry of Agriculture and Rural Development (MARD) of Viet Nam.

**NOTE:** Full details of the irradiation treatment, including dosage, must be included in the “Disinfestation and/or Disinfection Treatment” area of the phytosanitary certificate or as an endorsed attachment to the phytosanitary certificate.

B. For mangoes that have undergone **vapour heat treatment** the additional declarations required are:

The mangoes in this consignment have:

(i) been visually inspected in accordance with appropriate official procedures and found free from regulated organisms.

AND

(iii) been produced in accordance with terms of the Official Assurance Programme agreed between MAF and the Ministry of Agriculture and Rural Development (MARD) of Viet Nam.

**NOTE:** Full details of the vapour heat treatment, including temperature and duration, must be included in the “Disinfestation and/or Disinfection Treatment” area of the phytosanitary certificate or as an endorsed attachment to the phytosanitary certificate.
## Part E. Regulated organisms list for fresh mangoes from Viet Nam

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Organism Type</th>
<th>Common Name</th>
<th>Action on Interception</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Aspergillus stellifer</em></td>
<td>Fungi</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Cytosphaera mangiferae</em></td>
<td>Fungi</td>
<td>stem-end rot</td>
<td>2</td>
</tr>
<tr>
<td><em>Diaporthe rudis</em> (anamorph: <em>Phomopsis rudis</em>)</td>
<td>Fungi</td>
<td>bud blight</td>
<td>2</td>
</tr>
<tr>
<td><em>Dothiorella mangiferae</em></td>
<td>Fungi</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Gilbertella persicaria</em></td>
<td>Fungi</td>
<td>fruit rot</td>
<td>2</td>
</tr>
<tr>
<td><em>Penicillum fellutanum</em></td>
<td>Fungi</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Pestalotiopsis glandicola</em></td>
<td>Fungi</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Pestalotiopsis mangiferae</em></td>
<td>Fungi</td>
<td>branch dieback</td>
<td>2</td>
</tr>
<tr>
<td><em>Phyllosticta mortoni</em></td>
<td>Fungi</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>Aleurothrixus floccosus</em></td>
<td>Insect</td>
<td>woolly whitefly</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Aonidiella citrina</em></td>
<td>Insect</td>
<td>Californian red scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Aphis gossypii</em></td>
<td>Insect</td>
<td>cotton aphid</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Bactrocera caryae</em></td>
<td>Insect</td>
<td>fruit fly</td>
<td>3 or 4</td>
</tr>
<tr>
<td><em>Bactrocera correcta</em></td>
<td>Insect</td>
<td>guava fruit fly</td>
<td>3 or 4</td>
</tr>
<tr>
<td><em>Bactrocera cucurbitae</em></td>
<td>Insect</td>
<td>melon fly</td>
<td>3 or 4</td>
</tr>
<tr>
<td><em>Bactrocera diversa</em></td>
<td>Insect</td>
<td>fruit fly</td>
<td>3 or 4</td>
</tr>
<tr>
<td><em>Bactrocera dorsalis</em></td>
<td>Insect</td>
<td>oriental fruit fly</td>
<td>3 or 4</td>
</tr>
<tr>
<td><em>Bactrocera tau</em></td>
<td>Insect</td>
<td>fruit fly</td>
<td>3 or 4</td>
</tr>
<tr>
<td><em>Bactrocera zonata</em></td>
<td>Insect</td>
<td>peach fruit fly</td>
<td>3 or 4</td>
</tr>
<tr>
<td><em>Ceroplastes rubens</em></td>
<td>Insect</td>
<td>Japanese waxen worm</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Chrysomphalus aonidum</em></td>
<td>Insect</td>
<td>Florida red scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Chrysomphalus dictyospermi</em></td>
<td>Insect</td>
<td>Spanish red scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Coccus viridis</em></td>
<td>Insect</td>
<td>green coffee scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Lepidosaphes gloverii</em></td>
<td>Insect</td>
<td>Glover scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Parlatoria oleae</em></td>
<td>Insect</td>
<td>olive scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Parlatoria pergandii</em></td>
<td>Insect</td>
<td>chaff scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Pseudaaonidia trilobitiformis</em></td>
<td>Insect</td>
<td>cashew scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Pseudaulacaspis cockerelli</em></td>
<td>Insect</td>
<td>Cockerell's scale</td>
<td>2 or 4</td>
</tr>
<tr>
<td><em>Pseudaulacaspis pentagona</em></td>
<td>Insect</td>
<td>white peach scale</td>
<td>2 or 4</td>
</tr>
</tbody>
</table>
Actions on interception

1. Removal of trash - organisms are associated with other plant parts and/or soil
2. Treat, resort, reship or destroy
2a. Treat, reship or destroy. Suspend pathway
3. Reship or destroy. Suspend pathway
4. No action if irradiation has been certified to be used as a pre-export measure

NOTE: The suspension of the pathway could be at the production area, packhouse, province or country level depending on the significance of the risk organism and the interception.