

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

**Lychee
(*Litchi chinensis*)
from Thailand**

ISSUED

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Issuance

This import health standard for fresh lychee for consumption from Thailand has been issued pursuant to section 24A of the Biosecurity Act (1993).

Signature of Director, Plants, Food and Environment
Acting pursuant to delegated Director-General authority

Date:

IMPORT HEALTH STANDARD: FRESH FRUIT/VEGETABLES

Lychee (*Litchi chinensis*) from Thailand.

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Part A. Background

Scope

This document describes the requirements to be met to enable biosecurity clearance to be given for fresh lychee fruit (*Litchi chinensis*) for human consumption imported into New Zealand from Thailand. The commodity description “lychee” for human consumption is defined as commercially produced lychee fruit with calyx and peduncle, but without stems, leaves, roots or any other plant parts.

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.

MPI Import and Export Standards means the section within the Ministry for Primary Industries 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 lychee fruit.

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

Outcome

The agreed pre-shipment phytosanitary measures for specific regulated pests have been undertaken and the lychees are free of all regulated pests.

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, MPI 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 MPI in accordance with ISPM No.24: *Guidance for the determination and recognition of equivalence of phytosanitary measures* (2005).

Part B. General phytosanitary import requirements for all fresh fruit and 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 MPI website (<http://www.biosecurity.govt.nz/files/ihs/152-02.pdf>).

Part C. Additional requirements for lychee from Thailand

Phytosanitary measures

All lychee fruit for export to New Zealand must be sourced from orchards that produce commercial lychee fruit under standard cultivation, pest-control, harvesting and packing activities. During harvest, infested, infected or damaged fruit must be discarded prior to treatment.

MPI requires a mandatory pre-export treatment of lychee fruit for high risk regulated organisms, including economically significant fruit fly species. MPI currently approves vapour heat treatment or cold disinfestation or irradiation at the following specifications for fruit flies:

Vapour heat treatment (VHT)	Lychees must be treated with vapour heat and the temperature must be raised from ambient to 47°C or greater and held for a minimum of 20 minutes.
Cold disinfestation	Prior to arrival in New Zealand, the core temperature of the fruit must be held continuously at one of the following temperature/time combinations: Fruit pulp temperature held at: 0°C or below for 10 days 0.56°C or below for 11 days 1.11°C or below for 12 days 1.67°C or below for 14 days

Irradiation	Irradiation with a minimum dose of 250 Gy
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New Zealand MPI requires specific pre-export phytosanitary measures for *Conogethes punctiferalis*. NZ MPI currently approves the use of in-field pest control for Lepidoptera species throughout the production season **or** irradiation at a minimum dose rate of 250 Gy.

NZ MPI requires specific pre-export phytosanitary measures for fruit flies of economic . NZ MPI currently approves vapour heat treatment (Appendix 1); **or** cold disinfestation (Appendix 2); **or** irradiation (Appendix 4); these measures are to be carried out in accordance with IHS 152.02 and the official assurance programme.

The application of the irradiation treatment (Appendix 4) must be carried out in accordance with the ISPM No.18 *Guidelines for the use of irradiation as a phytosanitary measure*. NZ MPI approves the below irradiation doses:

- Fruit flies with a minimum dose rate of 150 Gy
- *Conogethes punctiferalis* with a minimum dose rate of 250 Gy
- Other IHS regulated arthropod pests¹ with a minimum dose rate of 400 Gy

Inspection of the consignment

Once the phytosanitary measures have been undertaken for high risk regulated organisms, the Thailand NPPO is required to sample and visually inspect the consignment according to official procedures for all regulated pests including those listed in [Part E](#), to ensure it meets New Zealand’s current import requirements. Where Appendix 4 (irradiation) is the phytosanitary measure to be undertaken, inspection will occur pre treatment. Where a regulated arthropod pest is detected on the commodity and Appendix 4 (irradiation) is the intended pre-export phytosanitary measure, appropriate irradiation dosages must be applied by Thailand’s NPPO. Alternative approved corrective actions may be conducted (e.g. methyl bromide fumigation), or the fruit shall not be exported to New Zealand.

Where Appendix 2 (cold disinfestation) is the phytosanitary measure to be undertaken, inspection will occur pre or post application of the phytosanitary measure; inspection will occur after phytosanitary measure has been undertaken for Appendix 1 (vapour heat treatment).

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 IHS Thailand’s NPPO must establish their regulatory status by consulting the MPI “Biosecurity Organisms Register for Imported Commodities” (BORIC), online at <http://www.biosecurity.govt.nz/pests/registers/boric>.

If an organism is not listed in BORIC, Thailand’s NPPO must contact MPI to establish the regulatory status of the organism.

¹ These regulated pests include those listed on this IHS that are not known to vector diseases.

Part D. Phytosanitary certification

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

Before a phytosanitary certificate is issued, Thailand's NPPO must be satisfied that the following activities have been undertaken.

The lychees in this consignment have:

- (i) been inspected in accordance with appropriate official procedures and found to be free from regulated pests, specified by the New Zealand Ministry for Primary Industries.

AND

- (ii) been treated by irradiation at a minimum absorbed dose of 250 Gy for *Conogethes punctiferalis*.

OR

been managed using in-field controls for *Conogethes punctiferalis*.

AND

- (iii) been treated in accordance with Appendix 1; **or** Appendix 2; **or** Appendix 4 of the official assurance programme between New Zealand Ministry for Primary Industries and the Thailand Department Of Agriculture.

Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment phytosanitary measures have been undertaken effectively, Thailand's NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:

The lychees in this consignment have:

- (i) been inspected in accordance with appropriate official procedures and found to be free from regulated pests, specified by the New Zealand Ministry for Primary Industries.

<p>NOTE: Compliance with this additional declaration is not necessary for arthropods if the Thailand NPPO certifies export of this consignment under Appendix 4. The consignment may contain live (but infertile or unable to emerge from pupation) regulated arthropod pests.</p>

AND

- (ii) been treated by irradiation at a minimum absorbed dose of 250 Gy for *Conogethes punctiferalis*.

OR

been managed using in-field controls for *Conogethes punctiferalis*.

AND

- (iii) been treated in accordance with Appendix 1; **or** Appendix 2; **or** Appendix 4 of the official assurance programme between New Zealand Ministry for Primary Industries and Thailand Department Of Agriculture.

NOTE: Full details of the vapour heat treatment (temperature and duration) or cold disinfestation (temperature and duration) or irradiation (including dosages) must be included in the “Disinfestation and/or Disinfection Treatment” area of the phytosanitary certificate or as an endorsed attachment to the phytosanitary certificate.

Cold disinfestation completed pre-export must have treatment details such as date, temperature, and duration of the cold disinfestation included in the treatment section of the phytosanitary certificate.

For cold disinfestation completed in-transit; printouts of all temperature sensors or direct electronic downloads are to be made available to MPI at the port of arrival in New Zealand for final clearance of the container.

Part E. Specified regulated pest list for lychee from Thailand

Scientific name	Organism type	Common name	Actions on interception
<i>Meliola eupaniae-majoris</i>	<i>fun</i>	sooty mould	2
<i>Peronophythora litchii</i>	<i>fun</i>	downy blossom blight	2
<i>Phytophthora palmivora</i>	<i>fun</i>	black rot	2
<i>Achaea janata</i>	<i>ins</i>	castor oil looper	2 or 4
<i>Aleurocanthus woglumi</i>	<i>ins</i>	citrus blackfly	2 or 4
<i>Aonidiella orientalis</i>	<i>ins</i>	oriental red scale	2 or 4
<i>Bactrocera cucurbitae</i>	<i>ins</i>	melon fly	3 or 4
<i>Bactrocera dorsalis</i>	<i>ins</i>	oriental fruit fly	3 or 4
<i>Ceroplastes pseudoceriferus</i>	<i>ins</i>	horned wax scale	2 or 4
<i>Ceroplastes rubens</i>	<i>ins</i>	pink wax scale	2 or 4
<i>Chrysomphalus aonidum</i>	<i>ins</i>	Florida red scale	2 or 4
<i>Chrysomphalus dictyospermi</i>	<i>ins</i>	Spanish red scale	2 or 4
<i>Coccus viridis</i>	<i>ins</i>	soft green scale	2 or 4
<i>Conogethes punctiferalis</i>	<i>ins</i>	yellow peach moth	2a or 4
<i>Conopomorpha cramerella</i>	<i>ins</i>	cocoa pod borer	2 or 4
<i>Conopomorpha litchiella</i>	<i>ins</i>	litchi leafminer	2 or 4
<i>Conopomorpha sinensis</i>	<i>ins</i>	litchi fruit borer	2 or 4
<i>Cryptophlebia ombrodelta</i>	<i>ins</i>	macadamia nut borer	2 or 4
<i>Deudorix epijarbas</i>	<i>ins</i>	Cornelian butterfly	2 or 4
<i>Dudua aprobola</i>	<i>ins</i>	brown tortrix	2 or 4
<i>Eublemma brachygonia</i>	<i>ins</i>	flower caterpillar	2 or 4
<i>Eublemma versicolor</i>	<i>ins</i>	flower caterpillar	2 or 4
<i>Eudocima fullonia</i>	<i>ins</i>	fruit-piercing moth	2 or 4
<i>Eudocima salamina</i>	<i>ins</i>	fruit-piercing moth	2 or 4
<i>Ferrisia virgata</i>	<i>ins</i>	guava mealybug	2 or 4
<i>Henosepilachna vigintioctopunctata</i>	<i>ins</i>	hadda beetle	2 or 4
<i>Icerya seychellarum</i>	<i>ins</i>	Okada cottony-cushion scale	2 or 4
<i>Leptoglossus gonagra</i>	<i>ins</i>	coreid bug	2 or 4
<i>Megalurothrips distalis</i>	<i>ins</i>	cereal thrips	2 or 4
<i>Nipaecoccus viridis</i>	<i>ins</i>	spherical mealybug	2 or 4
<i>Oecophylla smaragdina</i>	<i>ins</i>	red tree ant	2 or 4
<i>Orgyia postica</i>	<i>ins</i>	cocoa tussock moth	2 or 4
<i>Paracoccus interceptus</i>	<i>ins</i>	mealybug	2 or 4
<i>Parasa lepida</i>	<i>ins</i>	nettle caterpillar	2 or 4
<i>Pinnaspis strachani</i>	<i>ins</i>	Hibiscus snow scale	2 or 4
<i>Planococcus litchi</i>	<i>ins</i>	litchi mealybug	2 or 4
<i>Pseudococcus comstocki</i>	<i>ins</i>	Comstock mealybug	2 or 4
<i>Pseudococcus jackbeardsleyi</i>	<i>ins</i>	Jack Beardsley mealybug	2 or 4
<i>Pulvinaria psidii</i>	<i>ins</i>	green shield scale	2 or 4
<i>Selenothrips rubrocinctus</i>	<i>ins</i>	cocoa thrips	2 or 4
<i>Tessarotoma javanica</i>	<i>ins</i>	litchi stink bug	2 or 4

<i>Tessaratomya papillosa</i>	<i>ins</i>	litchi stink bug	2 or 4
<i>Thrips hawaiiensis</i>	<i>ins</i>	Hawaiian flower thrips	2 or 4
<i>Tirathaba rufivena</i>	<i>ins</i>	fruit borer	2 or 4
<i>Xyleborus fornicatus</i>	<i>ins</i>	tea shothole borer	2 or 4
<i>Xylotrupes gideon</i>	<i>ins</i>	elephant beetle	2 or 4

Actions on interception

- 2 Treat, resort, reship or destroy.
- 2a Treat, reship or destroy. Suspend pathway.
- 3 Reship or destroy. Suspend pathway.
- 4 Action dependent on pest interception and irradiation dosage certified as the pre-export measure.

Note: The suspension of the pathway could be at the production area, packhouse, state or country level, depending on the significance of the pest interception.

Appendix 1: Verification activities on arrival in New Zealand

MPI will inspect documentation on arrival in New Zealand. In addition, MPI may inspect a sample from each lot on arrival in New Zealand to verify requirements of the IHS have been met.

Actions undertaken upon interception of irradiated regulated pests

As the required response of regulated arthropod pests that have undergone the irradiation treatment is prevention of adult emergence or adult sterility (not mortality) a possibility exists that live (but infertile or unable to emerge from pupation) regulated arthropods may be present in a consignment.

In accordance with section 8.3 of ISPM 18 (2011) when mortality is not the required response, the detection of live stages of regulated pests in import inspection should not be considered to represent treatment failure resulting in non-compliance unless evidence exists to indicate that the integrity of the treatment system was inadequate.

MPI reserves the right for an analysis to be conducted on the detected regulated pest to verify treatment efficacy.