**[DRAFT]**

**Export Plan**

**for**

**Fresh Fruit and Vegetables**

**from Viet Nam**

**to**

**New Zealand**

Agreed between the Ministry of Agriculture and Rural Development of Viet Nam and the Ministry for Primary Industries of New Zealand

Date: xxxxx

Version: 1.1

# Title

Export Plan for Fresh Fruit and Vegetables from Viet Nam to New Zealand

# Commencement

This Export Plan is effective from the date of signing.

Agreed and signed on [Date of Signing].

Sign: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sign: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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## Version History

The following table details the published date and amendment details for this Export Plan.

|  |  |  |
| --- | --- | --- |
| **Version** | **Date** | **Amendment details** |
| 1.0 | 08 March 2018 | All details for Rambutan |
| 1.1 | xxxxx | * Change of Part 1, 2 and 3
* Added schedule for Citrus commodities
* Rewording of schedule for Rambutan
 |

# Part 1: Introduction

## 1.1 Purpose

1. This Export Plan describes the agreed activities that will be undertaken to meet the phytosanitary requirements for the export of fresh fruits and vegetables for human consumption from Viet Nam into New Zealand. The Export Plan includes details on how phytosanitary measures will be implemented and the system components that support effective management and verification of activities.

## 1.2 General

1. Fresh fruits and vegetables exported from Viet Nam to New Zealand must meet the requirements of the relevant import health standard (the Standard). Where an export plan is required, the activities listed in the Export Plan must be undertaken to comply with the requirements of the relevant import health standard. Where an import health standard lists multiple measures for a pest, only the measure(s) agreed to in this Export Plan will be acceptable.
2. If new measures are added to an import heath standard, the Plant Protection Department (PPD) of Viet Nam’s Ministry of Agriculture and Rural Development (MARD) and MPI must agree these in this Export Plan before the measures can be used.
3. Fresh fruits and vegetables that have regulated pests that require either Targeted Measures or MPI-Specified Measures require an Export Plan before trade may commence.
4. Pathways covered by this Export Plan may be audited by PPD and New Zealand's Ministry for Primary Industries (MPI).
5. PPD will maintain the Export Plan and consult MPI on changes to their documents that may be incorporated by reference.
6. Either party may request a review of this Export Plan.

## 1.3 References

1. The following documents are incorporated by reference in this Export Plan:
	1. ISPM 4. Requirements for the establishment of pest free areas. IPPC, Rome, FAO.
	2. ISPM 5. Glossary of phytosanitary terms. IPPC, Rome, FAO
	3. ISPM 7. Phytosanitary certification system. IPPC, Rome, FAO.
	4. ISPM 12. Phytosanitary certificates. IPPC, Rome, FAO.
	5. ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure. IPPC, Rome, FAO.
	6. ISPM 23. Guidelines for inspection. IPPC, Rome, FAO.
	7. ISPM 28. Irradiation treatment for fruit flies of the family Tephritidae (generic) IPPC, Rome, FAO
	8. ISPM 31. Methodologies for sampling of consignments. IPPC, Rome, FAO.
	9. MPI Schedule of Regulated (Quarantine) Weed Seeds. MPI; Wellington.
	10. Official New Zealand Pest Register (ONZPR). MPI; Wellington.

## 1.4 Definitions

**Authorised officers**

Individuals trained, assessed and appointed by PPD and who can perform a range of export functions on behalf of PPD.

**Basic Measures**

Definition as per Section 2.1 *Basic Measures.*

**Commercial production**

A process (system) where activities, such as in-field monitoring, pest control activities, harvesting, cleaning, sorting, and grading have been undertaken. These activities are carried out to minimise:

* the presence of regulated pests; and
* commodity damage which may be a result of the presence of a regulated pest or could expose the commodity to regulated pests.

**Export programme participants**

All participants registered with the exporting NPPO (e.g. growers, packhouses, storage facilities, treatment facilities and exporters) involved in specific activities around exporting particular commodities to a specific country.

**Export programme**

The defined arrangements undertaken by export programme participants to meet the prescribed requirements of an importing country.

**Homogeneous grower lot**

A number of units of a single commodity, identifiable by its homogeneity of composition, origin, etc., forming part of a consignment.

**In transit**

Refers to consignments in the process of being shipped to New Zealand, for example risk

goods in sea containers on board a vessel (these risk goods or consignments may have treatments

applied while the risk goods are en route to New Zealand)

**International Standards for Phytosanitary Measures (ISPM)**

International Standard for Phytosanitary Measures, available from:

<https://www.ippc.int/en/core-activities/standards-setting/ispms/>.

**MPI-Specified Measures**

Definition as per Section 2.3 *MPI-Specified Measures.*

**Non-regulated pests**

Organisms for which phytosanitary actions would not be undertaken if they were intercepted/detected.

**Official New Zealand Pest Register (ONZPR)**

The searchable database of pests regulated in New Zealand, including general information about each pest

as well as specific details for importers and exporters, available at <https://pierpestregister.mpi.govt.nz/>

**Online pest database**

ePest, the database that gives users a list of pests and associated phytosanitary measures specific to a

commodity from a specific country, available at <https://www.mpi.govt.nz/import/food/fresh-fruit-vegetables/requirements/epest/>

**Pest control activities**

Activities (such as cultural, chemical, biological, physical and behavioural) for the purpose of pest control

including phytosanitary measures such as pest-free area or phytosanitary treatment

**Pest Free Area**

Definition as per ISPM 5. *Glossary of phytosanitary terms.*

**Pest Free Place of Production**

Definition as per ISPM 5. *Glossary of phytosanitary terms.*

**Phytosanitary certification**

Definition as per ISPM 5. *Glossary of phytosanitary terms*

**Phytosanitary security**

Definition as per ISPM 5. *Glossary of phytosanitary terms*

**Regulated pest**

A pest that is identified as a regulated pest in [ONZPR](https://pierpestregister.mpi.govt.nz/) or the [Schedule of regulated (quarantine) weed seeds](https://www.mpi.govt.nz/document-vault/7111).

**Targeted Measures**

Definition as per Section 2.2 *Targeted Measures.*

**Viable regulated pest**

Any regulated pest that is capable of reproduction and development, including insects, plants, seeds and other organisms.

# Part 2: Phytosanitary Measures

## 2.1 Basic Measures

1. All fresh fruit and vegetable commodities for export to New Zealand will be sourced from a production site that uses standard commercial production methods.

## 2.2 Targeted Measures

1. Certain regulated pests cannot be effectively managed with Basic Measures alone. In these circumstances, additional phytosanitary measures (Targeted Measures) are required for regulated pests that pose a moderate risk to effectively reduce the risk of that regulated pest to an acceptable level.
2. Commodities in this Export Plan identified as requiring the application of Targeted Measures must also meet Basic Measures requirements.
3. PPD will ensure that an agreed Targeted Measure for each pest under the relevant commodity schedule(s) of this Export Plan has been applied.
4. An additional declaration is required on the phytosanitary certificate for pests requiring Targeted Measures listed in the [online pest database](https://www.mpi.govt.nz/import/food/fresh-fruit-vegetables/requirements/epest/) for Viet Nam.
5. An additional declaration is not required for pests requiring Targeted Measures if Viet Nam is recognised as having country freedom (Appendix 3).

## 2.3 MPI-Specified Measures

1. For certain high risk regulated pests (e.g. Tephritid fruit flies), MPI prescribes specified phytosanitary measures when a high degree of confidence is required to reduce the risk of entry and establishment of those regulated pests into New Zealand.
2. MPI-Specified Measures have known efficacy to detect, remove or kill those high risk regulated pests that the measures target.
3. Commodities in this Export Plan identified as requiring the application of MPI-Specified Measures must also meet Basic Measures requirements.
4. PPD will ensure that a prescribed MPI-Specified Measure for each pest under the relevant commodity schedule(s) of this Export Plan has been applied.
5. An additional declaration is required on the phytosanitary certificate for each pest requiring MPI-Specified Measures listed in the [online pest database](https://www.mpi.govt.nz/import/food/fresh-fruit-vegetables/requirements/epest/) for Viet Nam.
6. An additional declaration is not required for pests requiring MPI-Specified Measures detailed in an import health standard if Viet Nam is recognised as having country freedom (Appendix 3).

# Part 3: Supporting Activities

1. PPD will ensure the following activities are conducted as per ISPM 7. *Phytosanitary certification system*”.

## 3.1 Registration and product traceability

1. Product traceability through each commodity supply chain (i.e. from the field to export) will be achieved through registration of export programme participants.
2. Registration records will be sufficiently detailed to:
	1. trace the commodity through the supply chain;
	2. verify that phytosanitary activities have occurred as required in the relevant import health standard; and
	3. trace-back in the event of a non-compliance.
3. Export programme participant registration details will include the participant’s/establishment’s (see Table 1, left column) location and contact details.
4. Copies of registration records are not required in the Export Plan but should be made available for inspection by MPI on request.
5. A unique identifier to assist with traceability (such as the grower and packhouse registration number) will be displayed on packaging and referenced on the phytosanitary certificate to enable trace-back to the grower/place of production or packhouse facility.

## 3.2 Training

**3.2.1 Export programme participants**

1. PPD will provide training to export programme participants. Training will be provided to ensure that export programme participants are familiar with MPI’s requirements for importation of fresh fruits and vegetables from Viet Nam to New Zealand and the contents of this Export Plan.
2. Growers, packhouses, storage facilities and exporters will provide their staff with appropriate training programmes to ensure that their staff understand the documented procedures relevant to their role and are competent to carry out their duties.
3. Treatment facility operators will provide their staff with appropriate training programmes to ensure that their staff are competent to carry out or supervise phytosanitary treatments to meet the requirements of the relevant import health standard.

**3.2.2 NPPO staff**

1. PPD will provide its staff with training. The purpose of this training is to ensure that staff have the appropriate qualifications and skills for the duties and responsibilities of conducting phytosanitary certification activities.

## 3.3 Document and record management

1. PPD will have up to date documented systems in place for PPD’s official phytosanitary assurances.
2. PPD and the export programme participants will have records of exported consignments and related treatments held for a minimum of two years.
3. The example of types of records kept and parties responsible for maintaining records are summarised in Table 1.
4. Documents and records will be made available to MPI on request.

**Table 1:** Examples of the types of records that will be maintained by programme participants/establishments.

| Programme Participant | Records Maintained |
| --- | --- |
| **Growers/Production Sites** | Registration with PPDPre-planting activities (including details of source of planting material used)Pest control activities (including application of chemicals)Crop monitoring records (during production and pre-harvest)Harvest datesTraining records (e.g. pest identification) |
| **Packhouses/Storage Facilities/Establishments** | Registration with PPDDocumented procedures related to the packaging and storage of fresh fruits and vegetables for export to New ZealandProduct records (inwards and outwards)Hygiene and pest control activitiesAny post-harvest treatmentsQuality control activities (rejected product records including pests)Training records (e.g. pest identification) |
| **Treatment Facilities**  | Registration with PPDDocumented procedures related to the application of phytosanitary treatmentsPPD approvalMPI recognition (if applicable) Equipment maintenance and calibration records, including dose-mapping and routine dosimetry, where applicableGeneral hygiene, surveillance and monitoring of contaminants/insectsTraining records (e.g. treatment procedures and product security)Product records (including rejected lots) |
| **Exporters** (if independent of packhouses and storage facilities) | Registration with PPDProduct records and traceability informationCopies of export documentation |
| **PPD** | * Registration of programme participants
* Documented procedures related to phytosanitary certification activities
* Facility approvals (including name/address of facility, approval date, approval type, records of audit findings)
* MPI recognition of treatment facilities (if applicable)
* Audit reports (including internal audits of the phytosanitary certification system, third party audits on behalf of NPPO, etc.)
* Inspection and certification records including pest identification and rejected consignments
* Exported consignments and related treatments
* Training records
 |

## 3.4 Phytosanitary inspection and certification

1. PPD must:
	1. Sample each ‘homogeneous grower lot’ of the fresh commodity. The minimum sample size for inspection must be based on a 95% confidence level that no more than 0.5% of the units in the lot are infested as set out in ISPM 31. *Methodologies for sampling of consignments* Appendix 2;
	2. Visually inspect each sample unit according to official phytosanitary procedures in accordance with ISPM 23. *Guidelines for inspection*;

.



|  |
| --- |
| Right: Please see the sampling instructions based on **ISPM 31**. *Methodologies for sampling of consignments*. The column providing sampling results necessary under New Zealand legislation is highlighted in red |

1. If a pest is found that is not listed in the relevant import health standard or online pest database, PPD will establish the regulatory status of the pest using the [Official New Zealand Pest Register (ONZPR)](https://pierpestregister.mpi.govt.nz/). Where the pest is not listed in ONZPR, PPD must contact MPI ([PlantImports@mpi.govt.nz](https://piritahi.cohesion.net.nz/Sites/SAI/PP/PIM/EPWD/VietNam/PlantImports%40mpi.govt.nz)) so that MPI can identify the pest.
2. If a regulated pest is found, the consignment fails inspection and will not be exported to New Zealand.
3. PPD will issue a phytosanitary certificate in accordance with **ISPM 12**. *Phytosanitary Certificates* for compliant consignments. The phytosanitary certificate will have the additional declarations (including unique identifiers to identify participant/establishment numbers) as required in the relevant import health standard. Bilingual certificates are acceptable providing English is one of the languages used.
4. MPI will require PPD to have an additional declaration on the phytosanitary certificate stating the specified measures used.
5. The metric system (SI) should be used on the phytosanitary certificate.

## 3.5 Actions following pest detections during pre-export phytosanitary inspection

1. Detection of a pest during phytosanitary inspection may indicate that a phytosanitary measure has failed.

### 3.5.1 Actions following detection of pests requiring MPI-Specified Measures

1. For treated product: PPD will immediately suspend the treatment facility’s relevant treatment operation for export to New Zealand.
2. For ‘Area Freedom’ product: PPD will immediately suspend the relevant pest free area (PFA).
3. Suspension(s) must remain in place until PPD has carried out an investigation to determine the cause of the infestation and, if necessary, until PPD is satisfied that appropriate corrective actions have been implemented.

### 3.5.2 Actions following detection of pests requiring Targeted Measures

1. If appropriate end point treatments have been used, [Insert details of any actions agreed between PPD and MPI].
2. If appropriate pest control activities were applied, [Insert details of any actions agreed between PPD and MPI].
3. PPD should determine if an audit of the farm, packhouse or treatment facility is required and whether emergency measures are necessary as noted in (1) and (2) above.

## 3.6 Phytosanitary security

1. Phytosanitary security will be maintained for consignments for export to New Zealand.

|  |
| --- |
| **Activities to achieve phytosanitary security in packhouses and storage and treatment facilities at different control points** |
| 1. **Control point for before phytosanitary** **inspection**
 |  |
| 1. **Control point for post-phytosanitary inspection and post-packaging**
 |  |
| 1. **Control point for post-treatment**
 |  |
| 1. **Control point for pre-export storage and loading for export**
 |  |

## 3.7 Actions following detection of regulated pests on arrival in New Zealand

### 3.7.1 Detection of MPI Specified Measure pest

1. If a viable pest requiring an *MPI-Specified Measure* is detected on a consignment in New Zealand, the consignment will be reshipped or destroyed. MPI will suspend provisions of this Export Plan.
2. When PPD is notified about the detection, PPD must not issue further phytosanitary certificates for the affected commodity treated with the affected measure until MPI notifies PPD that PPD can resume phytosanitary certification for exports of the affected commodity.
3. PPD will identify and audit all entities in the supply chain involved with the consignment. Where applicable, corrective action will be taken.
4. The results of the audit will be reviewed by MPI before the suspended provisions can be used to export to New Zealand. The identified entities may also be audited by MPI and corrective actions undertaken before the suspended provisions can be reinstated to continue exports to New Zealand.

### 3.7.2 Detection of Targeted Measure pest

1. If a viable pest requiring a *Targeted Measure* is detected on a consignment in New Zealand, the consignment will be directed for appropriate treatment (if available), reshipped, or destroyed. MPI may suspend provisions of this Export Plan and/or request PPD to investigate to determine the cause of the infestation and ensure corrective actions are undertaken.

## 3.8 Audit

1. PPD will annually randomly select growers, production sites, packhouses, storage facilities and treatment facilities to audit.
2. These audits will occur during the growing and export seasons of the audited pathway. Additional audits will be conducted where non-compliance with this Export Plan is detected.
3. MPI may conduct an audit of the components of this Export Plan after commencement of trade of a commodity. Subsequent audits may be conducted at regular intervals or as required where non-compliance is found. All MPI audits will be arranged in consultation with PPD and will be in accordance with international guidelines and standards.
4. PPD audit reports will be made available to MPI on request.

# Part 4: Summary of responsibilities

The responsibilities for each party involved in the exportation of fresh fruits and vegetables are summarised in tables below.

**Table 2: Grower responsibilities**

|  |
| --- |
| Grower Activities |
| 1 | Register with PPD to produce commodities approved for export to New Zealand |
| 2 | Be familiar with the activities (e.g., in field pest management and/or systems approach) documented in the Export plan. |
| 3 | Monitor and manage quarantine pests using in field pest management and/or systems approach during production and at harvest as documented in the export plan. |
| 4 | Train staff in pest identification and management |
| 5 | Maintain records |

**Table 3: Packhouse/ Storage Facilities responsibilities**

|  |
| --- |
| Packhouse/ Storage Facilities Activities |
| 1 | Register with PPD to pack commodities approved for export to New Zealand |
| 2 | Be familiar with the activities (e.g., in field pest management and/or systems approach) documented in the Export plan. |
| 3 | Packing in retail ready packs, grading, inspection and secure disposal. |
| 4 | Maintain clean, pest free facility. |
| 5 | Produce segregation and phytosanitary security |
| 6 | Maintain records |
| 7 | Train staff |

**Table 4: Treatment provider responsibilities**

|  |
| --- |
| Treatment Provider Activities |
| 1 | Register with, and be approved by PPD to treat commodities approved for export to New Zealand |
| 2 | Be familiar with treatment specifications to export commodities approved to New Zealand.  |
| 4 | Maintain product traceability. |
| 5 | Maintain post-treatment phytosanitary security/ secure transport |
| 6 | Maintain records |
| 7 | Train staff |

**Table 5: Exporter responsibilities**

|  |
| --- |
| Exporter Activities (If different from packhouse and storage facilities) |
| 1 | Register with PPD to export commodities approved for export to New Zealand |
| 2 | Be familiar with the activities (e.g., in field pest management and/or systems approach) documented in the Export plan. |
| 3 | Maintain product traceability. |
| 4 | Maintain phytosanitary security. |
| 5 | Maintain records |
| 6 | Train staff |

**Table 6: PPD responsibilities**

|  |
| --- |
| MARD responsibilities. |
| 1 | Oversight of the fresh fruit and vegetables export programme including:* 1. Registration.
	2. Training programme participants/ establishments as required.
	3. Oversight of in-field monitoring and pest control activities.
	4. Verify programme participants/ establishments are meeting requirements in this export plan’

e. Official inspection and issuance of phytosanitary certificates. |
| 2 | Maintain records |
| 3 | Audit system components. |
| 4 | Train staff |

# Schedule 1: Mexican lime (*Citrus aurantiifolia*)

### Commodity description

Fresh Mexican lime for human consumption is defined as commercially produced fresh Mexican lime which may include calyx.

* Fresh Mexican lime (*Citrus aurantiifolia*) must not include flowers, leaves, roots or any other plant parts.

### General requirement

Consignments of fresh Mexican lime imported into New Zealand must be washed and brushed in the packhouse prior to export.

### Basic Measures

All fresh fruit and vegetable commodities for export to New Zealand will be sourced from a production site that uses standard commercial production methods. Pests requiring Basic Measures can be identified in the [online pest database](https://www.mpi.govt.nz/import/food/fresh-fruit-vegetables/requirements/epest/).

### Targeted Measures

Table 1 lists the pests and acceptable Targeted Measures to manage the risk associated with those pests on this commodity.

**Table 1: Pests requiring Targeted Measures**

|  |  |
| --- | --- |
| **Pest** | **Targeted Measure** |
| *Diaphorina citri [V]* | Appropriate pest control activities (Appendix 2) |
| *Nipaecoccus viridis* | Phytosanitary treatment – irradiation (Appendix 1) |
| *Planococcus kraunhiae* | Phytosanitary treatment – irradiation (Appendix 1) |
| *Planococcus minor* | Phytosanitary treatment – irradiation (Appendix 1) |
| *Scirtothrips dorsalis* | Phytosanitary treatment – irradiation (Appendix 1) |

### MPI-Specified Measures

Table 2 lists the pests and acceptable MPI-Specified Measures to manage the risk associated with those pests on this commodity.

**Table 2: Pests requiring MPI-Specified Measures**

|  |  |
| --- | --- |
| **Pest**  | **MPI-Specified Measures** |
| Fruit flies of the family Tephritidae | Phytosanitary treatment – irradiation (Appendix 1) |

# Schedule 2: Tahitian lime (*Citrus latifolia*)

### Commodity description

Fresh Tahitian lime for human consumption is defined as commercially produced fresh Tahitian lime (*Citrus latifolia*) which may include calyx and a small amount of stem but does not include leaves, larger twigs or shoots.

* Fresh Tahitian lime (*Citrus latifolia*) must not include flowers, leaves, roots or any other plant parts.

### General requirement

* Includes washing and brushing of the fruit in the pack house prior to export.

### Basic Measures

All fresh fruit and vegetable commodities for export to New Zealand will be sourced from a production site that uses standard commercial production methods. Pests requiring Basic Measures can be identified in the [online pest database](https://www.mpi.govt.nz/import/food/fresh-fruit-vegetables/requirements/epest/).

### Targeted Measures

Table 1 lists the pests and acceptable Targeted Measures to manage the risk associated with those pests on this commodity.

**Table 1: Pests requiring Targeted Measures**

|  |  |
| --- | --- |
| **Pest** | **Targeted Measure** |
| *Diaphorina citri* [V] | **Appropriate pest control activities** (Appendix 2) |
| *Nipaecoccus viridis* | **Phytosanitary treatment – irradiation** (Appendix 1) |
| *Planococcus kraunhiae* | **Phytosanitary treatment – irradiation** (Appendix 1) |
| *Planococcus minor* | **Phytosanitary treatment – irradiation** (Appendix 1) |
| *Scirtothrips dorsalis* | **Phytosanitary treatment – irradiation** (Appendix 1) |

### MPI-Specified Measures

Table 2 lists the pests and acceptable MPI-Specified Measures to manage the risk associated with those pests on this commodity.

**Table 2: Pests requiring *MPI-Specified Measures***

|  |  |
| --- | --- |
| **Pest**  | **MPI-Specified Measures** |
| Fruit flies of the family Tephritidae | **Phytosanitary treatment – irradiation** (Appendix 1) |

# Schedule 3: Lemon (*Citrus limon)* and *(Citrus limonia*)

### Commodity description

Fresh lemon for human consumption is defined as commercially produced fresh lemon which may include calyx.

* Fresh lemon (*Citrus limon)* and *(Citrus limonia*) must not include flowers, leaves, roots or any other plant parts.

### General requirement

Consignments of fresh lemon imported into New Zealand must be washed and brushed in the packhouse prior to export.

### Basic Measures

All fresh fruit and vegetable commodities for export to New Zealand will be sourced from a production site that uses standard commercial production methods. Pests requiring Basic Measures can be identified in the [online pest database](https://www.mpi.govt.nz/import/food/fresh-fruit-vegetables/requirements/epest/).

### Targeted Measures

Table 1 lists the pests and acceptable *Targeted Measures* to manage the risk associated with those pests on this commodity.

**Table 1: Pests requiring *Targeted Measures***

|  |  |
| --- | --- |
| **Pest** | **Targeted Measure** |
| *Diaphorina citri* [V] | **Appropriate pest control activities** (Appendix 2) |
| *Nipaecoccus viridis* | **Phytosanitary treatment – irradiation** (Appendix 1) |
| *Planococcus kraunhiae* | **Phytosanitary treatment – irradiation** (Appendix 1) |
| *Planococcus minor* | **Phytosanitary treatment – irradiation** (Appendix 1) |
| *Scirtothrips dorsalis* | **Phytosanitary treatment – irradiation** (Appendix 1) |
| *Tetranychus kanzawai* | **Phytosanitary treatment – irradiation** (Appendix 1) |

### MPI-Specified Measures

Table 2 lists the pests and acceptable *MPI-Specified Measures* to manage the risk associated with those pests on this commodity.

**Table 2: Pests requiring *MPI-Specified Measures***

|  |  |
| --- | --- |
| **Pest**  | ***MPI-Specified Measures*** |
| Fruit flies of the family Tephritidae | **Phytosanitary treatment – irradiation** (Appendix 1) |

# Schedule 4: Pomelo (*Citrus maxima*)

### Commodity description

Fresh pomelo for human consumption is defined as commercially produced fresh lemon which may include calyx.

* Fresh pomelo (*Citrus maxima*) must not include flowers, leaves, roots or any other plant parts.

### General requirement

Consignments of fresh pomelo imported into New Zealand must be washed and brushed in the packhouse prior to export.

### Basic Measures

All fresh fruit and vegetable commodities for export to New Zealand will be sourced from a production site that uses standard commercial production methods. Pests requiring Basic Measures can be identified in the [online pest database](https://www.mpi.govt.nz/import/food/fresh-fruit-vegetables/requirements/epest/).

### Targeted Measures

Table 1 lists the pests and acceptable Targeted Measures to manage the risk associated with those pests on this commodity.

**Table 1: Pests requiring Targeted Measures**

|  |  |
| --- | --- |
| **Pest** | **Targeted Measure** |
| *Diaphorina citri* [V] | Appropriate pest control activities (Appendix 2) |
| *Nipaecoccus viridis* | Phytosanitary treatment – irradiation (Appendix 1) |
| *Planococcus kraunhiae* | Phytosanitary treatment – irradiation (Appendix 1) |
| *Planococcus minor* | Phytosanitary treatment – irradiation (Appendix 1) |
| *Scirtothrips dorsalis* | Phytosanitary treatment – irradiation (Appendix 1) |
| *Tetranychus kanzawai* | Phytosanitary treatment – irradiation (Appendix 1) |

### MPI-Specified Measures

Table 2 lists the pests and acceptable MPI-Specified Measures to manage the risk associated with those pests on this commodity.

**Table 2: Pests requiring MPI-Specified Measures**

|  |  |
| --- | --- |
| **Pest**  | ***MPI-Specified Measures*** |
| Fruit flies of the family Tephritidae | Phytosanitary treatment – irradiation (Appendix 1) |

# Schedule 5: Rambutan (*Nephilium lappaceum*)

### Commodity description

Fresh rambutan for human consumption is defined as commercially produced fresh rambutan (*Nephilium lappaceum*) which may include calyx and a small amount of stem but does not include leaves, larger twigs or shoots.

* Fresh rambutan (*Nephilium lappaceum*) must not include flowers, leaves, roots or any other plant parts.

### General requirement

* Fresh rambutan undergoes an initial sorting process before manual cleaning.
* Each individual fresh rambutan fruit is cleaned after it has been separated from the bunch it was attached to. Fruit is manually cleaned, quality checked and weighed. This process is expected to result in visible pests being identified and removed (or infested fruit being discarded).
* Only clean, sanitary and either new or refurbished packaging material will be used, and security of consignments will be maintained (prior to export) to prevent the possibility of infestation.
* Fresh rambutan is packed in pest-proof boxes and loaded in a secure area.

### Basic Measures

All fresh fruit and vegetable commodities for export to New Zealand will be sourced from a production site that uses standard commercial production methods. Pests requiring Basic Measures can be identified in the [online pest database](https://www.mpi.govt.nz/import/food/fresh-fruit-vegetables/requirements/epest/).

### Targeted Measures

Table 1 lists the pests and acceptable Targeted Measures to manage the risk associated with those pests on this commodity.

**Table 1: Pests requiring Targeted Measures**

|  |  |
| --- | --- |
| **Pest** | **Targeted Measure** |
| *Conogethes punctiferalis* | Phytosanitary treatment – irradiation (Appendix 1) |
| *Cryptophlebia ombrodelta* | Phytosanitary treatment – irradiation (Appendix 1) |

### MPI-Specified Measures

Table 2 lists the pests and acceptable MPI-Specified Measures to manage the risk associated with those pests on this commodity.

**Table 2: Pests requiring MPI-Specified Measures**

|  |  |
| --- | --- |
| **Pest**  | **MPI-Specified Measures** |
| *Bactrocera dorsalis* (Oriental fruit fly) | Phytosanitary treatment – irradiation (Appendix 1) |

# Appendix 1: Irradiation

## Appendix 1.1: Irradiation of Rambutan (*Nephilium lappaceum*)

1. Treatment by irradiation must be at PPD certified/approved and MPI recognised irradiation treatment facility. Irradiation facilities must comply with:
	1. the Regional Standards for Phytosanitary Measures Approval of Irradiation Facilities (APPPC RSMP No.9) http://www.apppc.org/content/approval-irradiation-facilities;
	2. **ISPM 18** *Guidelines for the use of irradiation as a phytosanitary measure*; and
	3. **ISPM 28** *Phytosanitary treatments for regulated pests*
2. Copies of treatment records will be retained for each treatment and matched with phytosanitary certificate numbers for the treated consignment. Treatment and dosage will be verified by PPD. These records will be made available for inspection by MPI on request.
3. Rambutan that has been irradiated will be packaged, stored and transported under conditions that prevent re-infestation or contamination.
4. Irradiated fruit cartons will display the Radura irradiation symbol.
5. The re-export irradiation will be endorsed in the treatment section of the phytosanitary certificate or attached as a PPD-endorsed treatment certificate.

### Export System Specifications

#### Registration of Irradiation Facilities

1. PPD will only register irradiation facilities if satisfied that:
	1. all buildings and structures maintained in a state of good repair and weatherproof;
	2. buildings, equipment, and other physical facilities are maintained in a sanitary condition to prevent reinfestation of the consignments and/or lots being treated;
	3. a quality system in in place which details key management, personnel and associate responsibilities;
	4. the facility maintains a documented and auditable system of standard operating procedures (SOPs) covering all aspects of operations (including, but not limited to, management, staff training requirements, facility hygiene, receipt and tracking of produce, dosimetry and treatment processes for specified pests and commodities);
	5. the facility provides segregated storage for irradiated and non-irradiated product, preventing cross contamination and post-treatment reinfestation;
	6. validation records which verify that the irradiation facility meets its design requirements and operates to its design specification;
	7. the irradiation facility and equipment (e.g. radiation source, process control timer, irradiator containers, conveyer system and dosimeters) are fit for purpose (i.e., well constructed, functioning correctly and able to provide doses within the limits MPI has specified);
	8. dosimeters and other measuring equipment are accurate, and calibrated in accordance with the relevant international standards;
	9. operators are appropriately qualified and competent to carry out or supervise treatments;
	10. the facility has documented procedures for, and records of, dose mapping to determine the appropriate process parameters (including timer setting, conveyer speed and product-loading configuration) to meet the dose requirements for phytosanitary irradiation;
	11. procedures are established for implementing and documenting calibration and control systems and checking that systems are functioning according to specifications;
	12. documented procedures and process specifications are available to and understood by relevant staff; and
	13. the facility has documented procedures for control of non-conforming produce, and for corrective and preventative action.
2. PPD will update MPI as to any changes in facility registration status as these occur and provide a brief explanation as to the reason for any such change in status.

#### Export Packaging & Traceability

1. Produce will be packaged in pest-proof cartons prior to irradiation
2. Treated consignments and/or lots are adequately identified or labelled and adequately documented to allow traceback to individual treatment lots.
3. Each consignment and/or lot carries a unique identification number or other code to distinguish it from all other consignments and/or lots
4. Labelling or marking on the packaging must clearly identify that the produce has been treated with irradiation (Radura symbol).

#### Records management

1. The irradiation operator will record details of each treatment. The operator will, at a minimum, record:
	1. Description of the consignment including quantity and distinguishing numbers such as irradiation lot number, specification number or a reference to load configuration;
	2. Target pests and purpose of treatment (i.e. devitalisation);
	3. Radiation source and energy level;
	4. Date of treatment;
	5. Name of treatment facility;
	6. Minimum and maximum doses (specified and actual);
	7. Consignment owner;
	8. Any deviation from the treatment specification; and
	9. The name of the PPD-registered officer carrying out or supervising the irradiation treatment
2. Irradiation treatments of the consignment will be endorsed (stamped and signed) by a person registered by PPD. Records will be made available to MPI officials upon request for audit purposes.

#### Phytosanitary security

1. Where treated consignment is stored prior to loading, the consignment will be stored under conditions that prevent the re-infestation or contamination of the consignment.
2. The storage area will be free of untreated produce and contaminants. Any produce from other treated batches will be segregated.
The produce will be moved to the room and in a manner that will prevent re-infestation or contamination of the produce. The door of the room will be sealed until the produce is ready for loading.

#### Loading into containers

1. Containers will be inspected before loading to ensure they are free from pests and any vents are covered to prevent the entry of pests. Loading will take place under conditions that prevents reinfestation by pests and under the supervision of a person authorised by PPD.

#### Sealing of containers

1. A numbered, tamper proof seal will be placed on the door of the loaded container by an officer authorised by PPD. The seal number will be noted on the phytosanitary certificate.

### Technical Specifications

#### Dose mapping and Dosimetry

1. The facility must operate a dosimetry system capable of recording/measuring the entire range of dosages likely to be received by the product.
2. All components of the dosimetry system must be calibrated according to documented standard operating procedures.
3. Calibration procedures must comply with international standards or appropriate national standards (ISO/ASTM 51261 "Selection and Calibration of Dosimetry Systems for Radiation Processing", ISO/ASTM 51204 "Dosimetry in Gamma Irradiation Facilities for Food Processing" and ASTM guide - F 1355 "Irradiation of Fresh Fruits as a Phytosanitary Treatment", and ISPM 18).
4. An independent organisation recognised by MPI should assess performance of the dosimetry system.
5. Dosimetry must take into account variations due to density and composition of the shape, size, and orientation of the product, stacking, volume and packaging.
6. Dose mapping for the consignment must be completed and documented for each geometric packing configuration, arrangement and product density used during routine treatments.
7. Only NZ MPl-approved configurations are to be used for actual treatments.
8. Placement of dosimeters during dose mapping and routine monitoring must be sufficient to ensure that the maximum and minimum doses received by the produce are within the specified range for the phytosanitary treatment.
9. The absorbed dose delivered to each consignment will be monitored by calibrated dosimetry.
10. The results of the dose mapping will be used to select the most appropriate locations for dosimeters for routine monitoring of the absorbed dose delivered to each consignment of produce.

#### Irradiation Treatment

1. All fresh rambutan will be treated with irradiation by receiving a minimum absorbed dose of 289 Gray (maximum of 1000 Gray). The dosage of irradiation will be applied in accordance with ISPM 18 and as per PPD's system manual.
2. All treatments will be carried out by or directly supervised by an irradiation operator registered by PPD.
3. Based on the dose mapping, a process specification must be documented for consignment, including:
4. a description of the packaged consignment, including dimensions, density and orientation of product within the package and acceptable variations;
5. loading configuration of product within the irradiation container;
6. irradiator operating conditions and limits (e.g. beam characteristics, conveyor speed and source configuration);
7. conveyor path(s) to be used;
8. minimum and maximum doses;
9. routine dosimeter monitoring position(s);
10. relationship between the dose at the monitoring position(s) and the minimum and maximum doses; and
11. where applicable the handling and storage conditions required (e.g. temperature and humidity conditions).

### Commodities/pathways requiring irradiation to manage specific pest(s)

|  |  |  |
| --- | --- | --- |
| **Commodity** | **Pest** | **Dose rate**  |
| Rambutan (*Nephilium lappaceum*) | *Bactrocera dorsalis*  | Consignments of rambutan for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Conogethes punctiferalis*  | Consignments of rambutan for export to New Zealand will be irradiated at a minimum absorbed dose of:**289 Gy** |
| *Ctyptophlebia ombrodelta*  | Consignments of rambutan for export to New Zealand will be irradiated at a minimum absorbed dose of:**250 Gy** |
|  |  |  |

## Appendix 1.2: Irradiation of *Citrus* spp

1. Irradiation treatments must be carried out in accordance with:
	1. Vietnamese Technical Standard TCVN 7248:2008 (Standard practice for dosimetry in gamma irradiation facilities for food processing) and TCVN 7249:2008 (Standard practice for dosimetry in electron beam and X-ray (Bremsstrahlung) irradiation facilities for food processing)
	2. ISPM 18 (*Guidelines for the use of irradiation as a phytosanitary measure*)
	3. ISPM 28 (*Phytosanitary treatments for regulated pests*)
2. Irradiation treatments must be carried out at PPD certified/approved and MPI-recognised irradiation treatment facilities.
3. Irradiation equipment is operated by trained and qualified staff in accordance with SOPs of the irradiation facility.
4. When an application dossier for irradiation is submitted, the dossier and relevant information must be checked, including:
	* 1. name of owner,
		2. address,
		3. location of irradiation,
		4. time,
		5. name of commodity,
		6. number,
		7. quantity,
		8. packing material,
		9. packing type,
		10. PUC issued by competent authority,
		11. code of packing house
5. The commodity for irradiation is received at the storage area as regulated, checked before irradiation in compliance with relevant technical requirements:
	* 1. number/quantity,
		2. dimension,
		3. weight,
		4. packing type,
		5. regulated pests.
6. Packing materials must be appropriate, meet requirements of importing countries; packing houses must be approved by the competent authority. Different commodities will have different packing and package classification, based on following parameters:
	* 1. Dimension of package
		2. Number/quantity of packed products
		3. Maximum net weight
		4. Maximum gross weight.
7. Irradiated consignments must have logo, printed "RADURA", and information of irradiation reason; full information of irradiation facility; year, month and nation of irradiation; in compliance with TCVN 7087:2008 (CODEX STAN 1-1985, reviewed in Jan 1991, amended in Apr 2005) Labelling of pre-packaged foods. Labels must include following information:
	* 1. Radura word and Logo (international logo for irradiated products )
		2. Irradiation code
		3. PUC
		4. PHC
		5. Code of irradiation facility
		6. Packing date
		7. Number of packed lots as regulated by the packing house
		8. Date of irradiation
8. Dosimetry must be conducted to have dose mapping for different types of packages. Before transferring the irradiated products, dosimetry results and recorded values of relevant treatment parameters must be reviewed to prove the compliance with relevant technical regulations. Dosimetry must be conducted to have dose mapping for different types of packages.
9. The dose mapping is conducted in compliance with Vietnamese Technical Standard TCVN 7248:2008 (Standard practice for dosimetry in gamma irradiation facilities for food processing) and TCVN 7249:2008 (Standard practice for dosimetry in electron beam and X-ray (Bremsstrahlung) irradiation facilities for food processing). All components of the dosimetry system must be checked in accordance with relevant SOPs. In addition, the system must be also check in accordance with relevant international or national standards.
10. The installation of dosimeters aims to:
	* 1. identify dose and parameters of irradiation sources as well as process
		2. monitor changes of dose when parameters of irradiation process change during normal operation process.
		3. develop dose mapping.
11. The irradiation treatment facility needs to complete and keep all the dossier for each treatment as required by NPPO and other related competent authorities. A dossier includes:
	* 1. Name of irradiation facility and responsible persons;
		2. Name of irradiated commodities;
		3. Objective of irradiation;
		4. Regulated pests;
		5. Packing persons, producers, production location;
		6. Dimension, weight and identification of commodities, including number of packages
		7. Signs and identification;
		8. Number of lots;
		9. Dose (regulated and measured dose);
		10. Date of treatment;
		11. Deviation from requirement.
12. The configuration of the commodity during irradiation includes technical parameters to determine the dose distribution within the irradiation chambers and commodity, including dimension, quantity, density and position of irradiated commodities.
13. Time for irradiation depends on requirement for absorbed dose, results of dose distribution monitoring, pause time, speed of conveyor belt, arrangement of commodities.
14. In calculating and applying dose, consideration should be taken into changes in density and composition of materials, packages, shape and dimension, configuration, packing and weight of products. Before approving conditions for irradiation, NPPO requires irradiation facility to provide absorption distribution for different configuration and properties of the products.
15. The setting up, control, monitoring and documentation of treatment parameters (e.g., irradiation time, conveyor belt speed, configuration) which have been set up while assessing quality, considering radioactive isotope of cobalt with a half-life, to ensure that relevant technical standards are applied. Parameters to be monitored during irradiation include:
	* 1. Dose
		2. Time
		3. Temperature, humidity
		4. Ventilation and pressure.
16. Treatment records will be made available to MPI upon request.
17. Measurement of absorbed dose must be carried out in accordance with the Vietnamese Technical Standard TCVN 7248:2008 (Standard practice for dosimetry in gamma irradiation facilities for food processing) and TCVN 7249:2008 (Standard practice for dosimetry in electron beam and X-ray (Bremsstrahlung) irradiation facilities for food processing)
18. Irradiated commodities must be separated, clearly marked and stored at isolated areas which are safe, free from contamination and traceable.
19. The products must be safely transported from reception place to treatment place in a way which is traceable and free from cross-contamination risk.
20. Each irradiation facility needs to set up specific SOPs for transport and segregation or specific commodities. Unpacked or open commodities must be protected immediately after being treated to prevent contamination
21. Before transferring the irradiated products, dosimetry results and recorded values of relevant treatment parameters must be reviewed to prove the compliance with relevant technical regulations. Approval and certification of absorbed doses for each treatment in accordance with established quality assurance program.
22. The NPPO issues Phytosanitary Certificates based on information provided by the treatment facility. The PC certifies that the irradiation measures and additional phytosanitary requirements have been satisfied.
23. The pre-export irradiation will be endorsed in the treatment section of the phytosanitary certificate or attached as a PPD-endorsed treatment certificate.
24. Phytosanitary inspection includes inspection and sampling in accordance with relevant technical procedures in plant quarantine.
25. Phytosanitary inspection aims to check if the treatment meets requirements of the importing countries. This includes:
26. Documentary check to identify technical parameters as the basis for certification of the treatment.
27. Pest inspection to see if non-target pests are present. If non-target pests are found, study must be done if they are regulated pests of importing countries

### Commodities/pathways requiring Irradiation to manage specific pest(s)

|  |  |  |
| --- | --- | --- |
| **Commodity** | **Pest** | **Dose rate** |
| Pomelo (*Citrus maxima*) | *Bactrocera carambolae*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera correcta*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera dorsalis*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera zonata* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Zeugodacus cucurbitae (Bactrocera cucurbitae)*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Zeugodacus tau* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Nipaecoccus viridis,*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Planococcus minor*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Planococcus kraunhiae,*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Scirtothrips dorsalis* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Tetranychus kanzawai* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**420 Gy** |
|  |  |  |
| Tahitian lime (*Citrus latifolia*) | *Bactrocera carambolae*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera zonata*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera dorsalis*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Nipaecoccus viridis* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Planococcus minor*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Planococcus kraunhiae*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Scirtothrips dorsalis* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
|  |  |  |
| Mexican lime (*Citrus aurantiifolia*) | *Bactrocera carambolae*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera dorsalis*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera latifrons*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera zonata*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Nipaecoccus viridis,*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Planococcus minor*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Planococcus kraunhiae,*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Scirtothrips dorsalis* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
|  |  |  |
| Lemon (*Citrus limon*) and *(Citrus limonia)* | *Bactrocera carambolae*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera dorsalis*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera latifrons*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Bactrocera zonata*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**150 Gy** |
| *Nipaecoccus viridis,* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Planococcus minor*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Planococcus kraunhiae,*  | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Scirtothrips dorsalis* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**400 Gy** |
| *Tetranychus kanzawai* | Consignments for export to New Zealand will be irradiated at a minimum absorbed dose of:**420 Gy** |
|  |  |  |

1. Treatment by irradiation must be at a PPD certified/approved and NZ MPl-recognised irradiation treatment facility. Irradiation facilities must comply with:
2. the Regional Standards for Phytosanitary Measures Approval of Irradiation Facilities
	* 1. **(APPPC RSPM No.9) http://www.apppc.org/content/approval-irradiation-facilities;**
3. ISPM 18. Guidelines for the use of irradiation as a phytosanitary measure; and
4. ISPM 28. Phytosanitary treatments for regulated pests or
5. ISPM 28 PT 7 Irradiation treatment for fruit flies of the family Tephritidae (generic)
6. Copies of treatment records will be retained for each treatment and matched with phytosanitary certificate numbers for the treated consignment. Treatment and dosage will be verified by PPD.
7. These records will be made available for inspection by MPI on request.
8. The consignment that has been irradiated will be packaged, stored and transported under conditions that prevent infestation or contamination.
9. Irradiated fruit cartons will display the Radura irradiation symbol.
10. The pre-export irradiation will be endorsed in the treatment section of the phytosanitary certificate or attached as a PPD-endorsed treatment certificate.

**Export System Specifications**

***Registration of Irradiation Facilities***

1. As per Part 2. *Supporting Activities* PPD will only register irradiation facilities if satisfied that:
2. all buildings and structures are maintained in a state of good repair and are weatherproof;
3. buildings, equipment, and other physical facilities are maintained in a sanitary condition to prevent infestation of the consignments and/or lots being treated;
4. a quality system is in place which details key management, personnel and associated responsibilities;
5. the facility maintains a documented and auditable system of standard operating procedures (SOPs) covering all aspects of operations (including, but not limited to, management, staff training requirements, facility hygiene, receipt and tracking of produce, dosimetry and treatment processes for specified pests and commodities);
6. the facility provides segregated storage for irradiated and non-irradiated product, preventing cross contamination and post-treatment infestation;
7. validation records which verify that the irradiation facility meets its design requirements and operates to its design specification;
8. the irradiation facility and equipment (e.g. radiation source, process control timer, irradiator containers, conveyer system and dosimeters) are fit for purpose (i.e., well-constructed, functioning correctly and able to provide doses within the limits MPI has specified);
9. dosimeters and other measuring equipment are accurate, and calibrated in accordance with the relevant international standards;
10. operators are appropriately qualified and competent to carry out or supervise treatments;
11. the facility has documented procedures for, and records of, dose mapping to determine the appropriate process parameters (including timer setting, conveyer speed and product-loading configuration) to meet the dose requirements for phytosanitary irradiation;
12. procedures are established for implementing and documenting calibration and control systems and checking that systems are functioning according to specifications;
13. documented procedures and process specifications are available to and understood by relevant staff; and
14. the facility has documented procedures for control of non-conforming produce, and for corrective and preventative action.
15. PPD will update MPI as to any changes in facility registration status as these occur and provide a brief explanation as to the reason for any such change in status.

***Export Packaging & Traceability***

1. Produce will be packaged in pest-proof cartons prior to irradiation.
2. Treated consignments and/or lots are adequately identified or labelled and adequately documented to allow traceback to individual treatment lots.
3. Each consignment and/or lot carries a unique identification number or other code to distinguish it from all other consignments and/or lots.
4. Labelling or marking on the packaging must clearly identify that the produce has been treated with irradiation (Radura symbol).

***Records management***

1. The irradiation operator will record details of each treatment. The operator will, at a minimum, record:
2. Description of the consignment including quantity and distinguishing numbers such as irradiation lot number, specification number or a reference to load configuration;
3. Target pests and purpose of treatment (i.e. devitalisation);
4. Radiation source and energy level;
5. Date of treatment;
6. Name of treatment facility;
7. Minimum and maximum doses (specified and actual);
8. Consignment owner;
9. Any deviation from the treatment specification; and
10. The name of the PPD-registered officer carrying out or supervising the irradiation treatment.
11. Irradiation treatments of the consignment will be endorsed (stamped and signed) by a person registered by PPD. Records will be made available to MPI officials upon request for audit purposes.

***Phytosanitary security***

1. Where treated consignment is stored prior to loading, the consignment will be stored under conditions that prevent the re-infestation or contamination of the consignment.
2. The storage area will be free of untreated produce and contaminants. Any produce from other treated batches will be segregated. The produce will be moved to the room and in a manner that will prevent re-infestation or contamination of the produce. The door of the room will be sealed until the produce is ready for loading.

***Loading into containers***

1. Containers will be inspected before loading to ensure they are free from pests and any vents are covered to prevent the entry of pests. Loading will take place under conditions that prevents reinfestation by pests and under the supervision of a person authorised by PPD.

***Sealing of containers***

1. A numbered, tamper proof seal will be placed on the door of the loaded container by an officer authorised by PPD. The seal number will be noted on the phytosanitary certificate.

**Technical Specifications**

***Dose mapping and Dosimetry***

1. The facility must operate a dosimetry system capable of recording/measuring the entire range of dosages likely to be received by the product.
2. All components of the dosimetry system must be calibrated according to documented standard operating procedures.
3. Calibration procedures must comply with international standards or appropriate national standards (ISO/ASTM 51261 "Selection and Calibration of Dosimetry Systems for Radiation Processing", ISO/ASTM 51204 "Dosimetry in Gamma Irradiation Facilities for Food Processing" and ASTM guide - F 1355 "Irradiation of Fresh Fruits as a Phytosanitary Treatment", and ISPM 18).
4. An independent organisation recognised by MPI should assess performance of the dosimetry system.
5. Dosimetry must take into account variations due to density and composition of the shape, size, and orientation of the product, stacking, volume and packaging.
6. Dose mapping for the consignment must be completed and documented for each geometric packing configuration, arrangement and product density used during routine treatments.
7. Only NZ MPl-approved configurations are to be used for actual treatments.
8. Placement of dosimeters during dose mapping and routine monitoring must be sufficient to ensure that the maximum and minimum doses received by the produce are within the specified range for the phytosanitary treatment.
9. The absorbed dose delivered to each consignment will be monitored by calibrated dosimetry.
10. The results of the dose mapping will be used to select the most appropriate locations for dosimeters for routine monitoring of the absorbed dose delivered to each consignment of produce.

***Irradiation Treatment***

1. All consignments will be treated with irradiation by receiving a minimum absorbed dose Gray accordance with **ISPM 18** and/or **ISPM 28 PT 7** and as per PPD's system manual.
2. All treatments will be carried out by or directly supervised by an irradiation operator registered by PPD.
3. Based on the dose mapping, a process specification must be documented for consignment, including:
4. a description of the packaged consignment, including dimensions, density and orientation of product within the package and acceptable variations;
5. loading configuration of product within the irradiation container;
6. irradiator operating conditions and limits (e.g. beam characteristics, conveyor speed and source configuration);
7. conveyor path(s) to be used;
8. minimum and maximum doses;
9. routine dosimeter monitoring position(s);
10. relationship between the dose at the monitoring position(s) and the minimum and maximum doses; and
11. where applicable the handling and storage conditions required (e.g. temperature and humidity conditions).

# Appendix 2: Appropriate pest control activities

**Scope**

The in-field measures will be implemented and agreed to by PPD and MPI.

Pathways requiring in-field control(s)

## Commodities/pathways requiring appropriate pest control activities

|  |  |  |
| --- | --- | --- |
| **Pest(s)** | **Commodity/Commodities** | **Appropriate pest control activities agreed to by PPD and MPI** |
| *Diaphorina citri* [V] (vector of *Candidatus* Liberibacter spp.) | * *Mexican lime (Citrus aurantiifolia)*
* *Tahitian lime (Citrus latifolia)*
* *Lemon (Citrus limon) and*
* *(Citrus limonia)*
 | **In-field management:**1. Biological control

•Protecting natural enemies in orchards.•No intercrops applying.• Disease-resistant varieties used.1. Orchard sanitation practices

•Burying and/or burning all of fallen fruits and leaves in affected orchards to reduce the inoculum pressure in the field.•Discouraging inter-planting in affected orchards composed of mature producing trees, thus preventing disease development.•Using pest-free seedlings1. Chemical control

•Application of limestone powder solution prior to planting.•Spraying of horticultural oils and mixtures of mineral oils and insecticides at critical points during the season. Regular monitoring programmes to detect pest presence and population intensity for spraying. |
|  |  | **Post-harvest management:**Targeted washing and cleaning of the commodity, including physical/manual removal of pests |
| *Diaphorina citri* [V] | * *Pomelo (Citrus maxima)*
 | **In-field management:**1. Biological control

•Protecting natural enemies in orchards.•No intercrops applying.•Diseases-resistant varieties using.1. Orchard sanitation practices

•Burying and/or burning all of fallen fruits and leaves in affected orchards to reduce the inoculum pressure in the field.•Discouraging inter-planting in affected orchards composed of mature producing trees, thus preventing disease development.•Using pest-free seedlings* **Bagging**
1. Chemical control

•Application of limestone powder solution prior to planting.•Spraying of horticultural oils and mixtures of mineral oils and insecticides at critical points during the season. Regular monitoring programmes to detect pest presence and population intensity for spraying.**Post-harvest management:**1. At packing houses, sort and grade citrus fruits to remove leaves; branches; pest-affected, deformed and rotten fruits.
2. Submerge fresh citrus fruit in a surfactant.
3. Before packing, wash, brush and apply other measures to (e.g. visual inspection…) citrus fruit to remove the fruits that have impurities, insects and soil.
 |

# Appendix 3: Country Freedom

1. Country freedom shall be established, maintained and verified as per [*insert name of NPPO procedure/policy for establishing, maintaining and verifying country freedom status or provide details below under the proposed information placeholders*] in accordance with **ISPM 4.** *Requirements for the establishment of pest free areas*.

### Targeted Measure Pests

1. MPI recognises Viet Nam as free from the following pests detailed in New Zealand import health standards that require *Targeted Measures* for commodities included in this Export Plan:
2. *Caliothrips fasciatus*
3. *Chaetanaphothrips orchidii*
4. *Eotetranychus lewisi*
5. *Trioza erytreae* [V](Vector of *Candidatus Liberibacter* spp. present in Viet Nam)

### MPI-Specified Measure Pests

1. MPI recognises Viet Nam as free from the following pests detailed in New Zealand import health standards that require *MPI-Specified Measures* for commodities included in this Export Plan:
	1. *Anastrepha fraterculus*
	2. *Anastrepha ludens*
	3. *Anastrepha obliqua*
	4. *Anastrepha serpentina*
	5. *Anastrepha sororcula*
	6. *Anastrepha striata*
	7. *Anastrepha suspensa*
	8. *Bactrocera aquilonis*
	9. *Bactrocera curvipennis*
	10. *Bactrocera distincta*
	11. *Bactrocera frauenfeldi*
	12. *Bactrocera jarvisi*
	13. *Bactrocera kirki*
	14. *Bactrocera kraussi*
	15. *Bactrocera melanotus*
	16. *Bactrocera melas*
	17. *Bactrocera minax*
	18. *Bactrocera neohumeralis*
	19. *Bactrocera passiflorae*
	20. *Bactrocera psidii*
	21. *Bactrocera species near passiflorae*
	22. *Bactrocera trilineola*
	23. *Bactrocera trivialis*
	24. *Bactrocera tryoni*
	25. *Bactrocera tsuneonis*
	26. *Bactrocera xanthodes*
	27. *Ceratitis capitata*

### Vector organisms and Vector-transmitted pathogens:

To manage the risk of introduction of vector-transmitted pathogens to New Zealand, MPI regulates the entry of pests acting as vectors (marked with [V]). If a vector-transmitted pathogen is present in the exporting country additional measures may be required for vector pests on exports from that country

MPI recognises Viet Nam as free from the following vector-transmitted pathogen of concern to New Zealand detailed in the risk assessment justifying *Targeted Measures:*

1. *Citrus leprosis viruses*

Should this vector-transmitted pathogen be detected in Viet Nam, MPI requests notification from PPD.

Known vector pests [V] of *Citrus leprosis viruses are:*

1. *Brevipalpus californicus* [V]
2. *Brevipaplus obovatus* [V]
3. *Brevipaplus phoenicis sensu lato* [V]