

**EXPORT PLAN  
FOR  
RAMBUTAN (*Nephelium lappaceum*)  
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**

Signed in duplicate in Hanoi, on the ..... day of ..... 2018, in the English language.



for Plant Protection Department  
Ministry of Agriculture and Rural Development  
VIET NAM

.....  
for Ministry for Primary Industries  
NEW ZEALAND

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# 1 INTRODUCTION

- (1) This Export Plan describes the activities that will be undertaken to meet the phytosanitary requirements for the export of rambutan (*Nephelium lappaceum*) from Viet Nam to New Zealand. It includes details on how measures will be implemented and the system components to support effective management and verification of activities.
- (2) This Export Plan will be audited by the Plant Protection Department (PPD) of Viet Nam's Ministry of Agriculture and Rural Development, and New Zealand's Ministry for Primary Industries (MPI).
- (3) The Export Plan may be reviewed on request by either party.

## 1.1 Commodity Description

- (1) This Export Plan refers to the export of commercially produced rambutan to New Zealand.
- (2) The rambutan may include a short stem but flowers and leaves will be excluded.

## 1.2 Export Plan Overview

- (1) Table 1 presents a summary of the measures and supporting activities undertaken to meet the requirements documented in the Import Health Standard for Fresh Rambutan for Human Consumption (IHS). The responsibilities and procedures to effectively implement these measures and supporting activities are described in further detail in Part 2 and summarised in Part 6 (Tables 5-9).

Table 1: Overview of the measures and supporting system for the export of rambutan.

AGREED MEASURES FOR REGULATED QUARANTINE PESTS	
<b>SUPPORTING ACTIVITIES</b>	<p style="text-align: center;">Product traceability; training; records management; phytosanitary security, inspection and certification; audit</p> 
	<p><b>Basic Measures</b></p> <ol style="list-style-type: none"> <li>1. Commercial production using standard cultivation, pest-control, harvesting, inspection and packing. <ul style="list-style-type: none"> <li>• All regulated pests.</li> </ul> </li> </ol>
	<p><b>Targeted Measures</b></p> <ol style="list-style-type: none"> <li>1. Irradiation at a minimum absorbed dose of 250 Gy. <ul style="list-style-type: none"> <li>• <i>Conogethes punctiferalis</i></li> <li>• <i>Cryptophlebia ombrodelta</i></li> </ul> </li> </ol>
	<p><b>MPI-Specified Measures</b></p> <ol style="list-style-type: none"> <li>1. Irradiation at a minimum absorbed dose of 150Gy <ul style="list-style-type: none"> <li>• <i>Bactrocera dorsalis</i></li> </ul> </li> </ol>

**Guidance:** A single dose of 250 Gy is considered sufficient to manage both the Targeted Measure and MPI-Specified Measure pests listed above.

## 2 SUPPORTING ACTIVITIES

- (1) As per International Standard for Phytosanitary Measures (ISPM) 7. *Phytosanitary certification system* (<https://www.ippc.int/en/publications/613/>).

### 2.1 Registration & Product Traceability

- (1) Product traceability through the rambutan supply chain will be achieved through registration by PPD of participants (growers, packhouses, treatment facilities, storage facilities, exporters) involved in exporting rambutan to New Zealand. Registration records will be used as the mechanism to:
  - a) track information about the commodity;
  - b) to verify that phytosanitary activities have occurred as required in the IHS; and
  - c) to trace-back in the event of a non-compliance to determine corrective actions.
- (2) Grower, packhouse, storage facility and exporter registration details will include location and contact details.
- (3) Treatment facility registration details will include location, contact details, floor plans and dimensions, equipment specifications (e.g. radiation source, process control timer, irradiator containers, conveyer system and dosimeters) and MPI recognition and PPD approval status.
- (4) Copies of registration records will be made available for inspection by MPI on request. A unique identifier will be displayed on cartons and referenced on the phytosanitary certificate to enable trace-back to the grower and place of production.

### 2.2 Training

- (1) Training will be provided to export programme participants by PPD prior to the export season to ensure they are familiar with the IHS requirements and the contents of this Export Plan.
- (2) Growers, packhouses storage facilities and exporters will have documented procedures that are available to, and understood by, relevant staff. Training records and competency assessments will be maintained as appropriate.
- (3) Treatment facility operators will have appropriate recognised training and be competent to carry out or supervise treatments to meet the IHS requirements. Training records and competency assessments will be maintained as appropriate.

## 2.3 Records Management

- (1) Participants involved in exporting rambutan to New Zealand will document and maintain records for at least two years.
- (2) The types of records kept and parties responsible for maintaining records are summarised below.

*Table 2. Summary of the types of records that will be maintained by participants involved in exporting rambutan to New Zealand.*

Participant	Records Maintained
<b>1. Growers</b>	<ul style="list-style-type: none"> <li>• Registration</li> <li>• Documented procedures</li> <li>• Crop monitoring records (during production &amp; pre-harvest)</li> <li>• Pest control activities (including application of chemicals)</li> <li>• Harvest dates</li> <li>• Training records (pest identification)</li> </ul>
<b>2. Packhouses or Storage Facilities</b>	<ul style="list-style-type: none"> <li>• Registration</li> <li>• Documented procedures</li> <li>• Product records (inwards and outwards)</li> <li>• Quality inspection (rejected product records)</li> <li>• Training records (pest identification)</li> </ul>
<b>3. Treatment Facilities (irradiation)</b>	<ul style="list-style-type: none"> <li>• Registration</li> <li>• Documented operating procedures</li> <li>• PPD approval</li> <li>• Compliance agreement with PPD</li> <li>• Approval by relevant nuclear authorities</li> <li>• MPI recognition</li> <li>• Equipment maintenance and calibration records, including dose-mapping and routine dosimetry</li> <li>• Training records</li> <li>• Consignment treatment records (including rejected lots)</li> </ul>
<b>4. Exporters (if independent of packhouses/ storage facilities)</b>	<ul style="list-style-type: none"> <li>• Registration</li> <li>• Product records and information to allow traceback of non-compliant consignments</li> <li>• Copies of export documentation</li> </ul>

Participant	Records Maintained
5. PPD	<ul style="list-style-type: none"> <li>• Registration</li> <li>• Facility approvals</li> <li>• MPI recognition of treatment facilities</li> <li>• Audit reports (pre-season, pre-harvest)</li> <li>• Inspection and certification records including pest identifications and rejected consignments</li> </ul>

## 2.4 Phytosanitary Inspection & Certification

- (1) Prior to irradiation treatment and phytosanitary certification, PPD will sample and visually inspect all consignments on a homogenous grower lot basis for pests and diseases, and confirm that the rambutan is export quality. Where a regulated pest is detected, or the fruit is not export quality, appropriate mitigation (pre-export treatment) action agreed between PPD and MPI will be conducted (see Table 3), or the rambutan will not be exported to New Zealand.

Table 3. Mitigation Actions

Issue	Action
Live fruit flies (including <i>Bactrocera dorsalis</i> ) at any developmental stage.	Reject the lot. Do not export to New Zealand.
Live <i>Conogethes punctiferalis</i> and <i>Cryptophlebia ombrodelta</i> at any developmental stage.	Reject the lot. Do not export to New Zealand.
Pupae or adults of any organism in the Lepidoptera family.	Reject the lot. Do not export to New Zealand.
Other regulated arthropod pests.	Irradiation with a minimum dose rate of 400 Gy.
Disease symptoms.	Resorting of lot to remove diseased rambutan.
Damaged fruit, trash or other plant parts (e.g. leaves, stems, flowers).	Resorting of lot to remove damaged fruit, trash and other plant parts.

- (2) PPD will determine the sample size for visual inspection from ISPM 31. *Methodologies for sampling of consignments*, Appendix 2 (Table 1): Table of minimum samples sizes for 95% and 99% confidence levels at varying levels of detection according to lot size, hypergeometric distribution, where P = 95% (confidence level) at a 0.5% level of detection times efficacy of detection.
- (3) PPD will maintain inspection records including:
- the inspection date;
  - the grower, packhouse and treatment facility registration numbers;
  - the size of each lot;
  - the sample sizes taken;
  - pests found; and
  - actions taken.

These records will be made available for inspection by MPI on request.

- (4) If pests are found which are not specified by MPI in the IHS or ePest, PPD will establish their regulatory status using MPI's Biosecurity Organisms Register for Imported Commodities: <http://www.biosecurity.govt.nz/pests/registers/boric>.
- (5) PPD will issue a phytosanitary certificate in accordance with ISPM 12. *Phytosanitary certificates*. The phytosanitary certificate will have the additional declarations as required in the IHS.

## 2.5 Phytosanitary Security

- (1) Phytosanitary security will be maintained for consignments of rambutan for export to New Zealand following phytosanitary inspection and certification (see Table 4).
- (2) Activities to achieve phytosanitary security in packhouse, irradiation and storage facilities will include:
  - a) control of pests (e.g. insect zappers, disinfectants and cleaning activities) to minimise the presence of regulated pests of concern to New Zealand;
  - b) pest-proof packaging of rambutan following phytosanitary inspection;
  - c) segregation of packaged rambutan for export to New Zealand from other consignments; and
  - d) secure loading of rambutan for export into inspected and clean container/conveyance.

Table 4. Phytosanitary Security Control Points

Control Point	Phytosanitary Security Actions
1. Post - phytosanitary inspection and post-packaging	<ul style="list-style-type: none"> <li>➤ Pest-proof packaging or stored in a secure area, free from pest infestation</li> <li>➤ Fruit for New Zealand segregated from other consignments</li> </ul>
	
2. Post-treatment	<ul style="list-style-type: none"> <li>➤ Pest-proof packaging or stored in a secure area, free from pest infestation</li> </ul>
	
3. Pre-export storage & loading for export	<ul style="list-style-type: none"> <li>➤ Pest-proof packaging or secure loading into clean, pest-proof conveyance</li> </ul>

## 2.6 Audit

- (1) Officers authorised by PPD will conduct a random audit of the growers, packhouses, storage and

treatment facilities detailed in this Export Plan in accordance with PPD official procedures. Additional audits will be conducted where non-compliance with this Export Plan is detected.

- (2) MPI will conduct an audit of the components of this Export Plan within eighteen months of commencement of trade. Subsequent audits will be conducted approximately every three years or as required where non-compliance is found. All audits will be arranged in consultation with PPD and will be in accordance with international guidelines and standards.

### **3 BASIC MEASURES**

- (1) Rambutan will be commercially produced using standard cultivation, pest-control, harvesting, quality inspection and packing activities followed by official inspection and certification.
- (2) 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 re-infestation.

### **4 TARGETED MEASURES**

- (1) The following targeted measure will be applied to rambutan to minimise the risk posed to New Zealand by *Conogethes punctiferalis* and *Cryptophlebia ombrodelta*.

#### **4.1 Irradiation**

- (1) Consignments of rambutan for export to New Zealand will be irradiated at a minimum absorbed dose of 250 Gray (maximum of 1000 Gray). This dose will also manage *Bactrocera dorsalis*, as per the MPI-Specified Measure.

### **5 MPI-SPECIFIED MEASURES**

- (1) The following MPI-specified measure will be applied to rambutan to minimise the risk posed to New Zealand by *Bactrocera dorsalis*.

#### **5.1 Irradiation**

- (1) Consignments of rambutan for export to New Zealand will be irradiated at a minimum absorbed dose of 150 Gray (maximum of 1000 Gray).

## 6 SUMMARY OF RESPONSIBILITIES

- (1) Responsibilities for each party involved in the export of rambutan are summarised in the tables below, with references to this Export Plan:

*Table 5. Growers*

<b>GROWER ACTIVITIES</b>	<b>REFERENCE</b>
1. Register with PPD to produce rambutan for export to New Zealand	2.1
2. Be familiar with the activities documented in this Export Plan	2-3
3. Monitor and manage regulated quarantine pests during production and at harvest as required by MPI	2-3
4. Train staff in pest identification and management	2.2
5. Identify rambutan at harvest for transport to packhouse	2.1
6. Maintain records	2.3

*Table 6. Packhouses or Storage Facilities*

<b>PACKHOUSE OR STORAGE FACILITY ACTIVITY</b>	<b>REFERENCE</b>
1. Register with PPD to pack/store rambutan for export to New Zealand	2.1
2. Be familiar with the activities documented in this Export Plan	2-3
3. Implement packing, grading, inspection and secure disposal of waste material	2.5
4. Maintain clean, pest free facilities	2.5
5. Ensure product segregation and phytosanitary security	2.5
6. Train staff	2.2
7. Maintain records	2.3

Table 7. Treatment Facilities

TREATMENT FACILITY ACTIVITY (SEE ALSO APPENDIX 1)	REFERENCE
1. Register with, and be approved by PPD to treat rambutan for export to New Zealand	2.1
2. Maintain product traceability	2.1
3. Be familiar with the treatment requirements for rambutan for export to New Zealand documented in this Export Plan	3, 4, 5
4. Maintain post-treatment phytosanitary security/ secure transport	2.5
5. Train staff	2.2
6. Maintain records	2.3

Table 8. Exporters

EXPORTER ACTIVITIES (IF DIFFER FROM PACKHOUSES AND STORAGE FACILITIES)	REFERENCE
1. Register with PPD to export rambutan to New Zealand	2.1
2. Maintain product traceability	2.1
3. Be familiar with the requirements to export rambutan to New Zealand	1, 2, 3, 4, 5
4. Maintain phytosanitary security	2.5
5. Train staff	2.2
6. Maintain records	2.3

Table 9. PPD

PPD ACTIVITIES	REFERENCE
1. Provide oversight of rambutan export system (from production to final export)	All parts
a) Registration of export system participants	2.1
b) Train export system participants as required	2.2

PPD ACTIVITIES	REFERENCE
c) Assess and provide approvals for treatment facilities	2
d) Oversight of in-field activities	3
e) Verify export system participants are meeting requirements including phytosanitary security	All parts
f) Official inspection and issuance of phytosanitary certificates	2.4
2. Maintain records	2.3
3. Audit export system participants for compliance with this Export Plan	2.6

## APPENDIX 1: MPI SPECIFICATIONS FOR IRRADIATION

- (1) Treatment by irradiation must be at a PPD certified/approved and MPI-recognised irradiation treatment facility. Irradiation facilities must comply with:
  - a) the Regional Standards for Phytosanitary Measures Approval of Irradiation Facilities (APPPC RSPM No.9) <http://www.apppc.org/content/approval-irradiation-facilities>;
  - b) ISPM 18. *Guidelines for the use of irradiation as a phytosanitary measure*; and
  - c) 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 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:
  - a) all buildings and structures maintained in a state of good repair and weatherproof;
  - b) buildings, equipment, and other physical facilities are maintained in a sanitary condition to prevent reinfestation of the consignments and/or lots being treated;
  - c) a quality system is in place which details key management, personnel and associated responsibilities;
  - d) 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);
  - e) the facility provides segregated storage for irradiated and non-irradiated product, preventing cross contamination and post-treatment reinfestation;
  - f) validation records which verify that the irradiation facility meets its design requirements and operates to its design specification;
  - g) the irradiation facility and equipment (e.g. radiation source, process control timer, irradiator containers, conveyer system and dosimeters) are fit for purpose (that is, well constructed, functioning correctly and able to provide doses within the limits MPI has specified);
  - h) dosimeters and other measuring equipment are accurate, and calibrated in accordance with the relevant international standards;
  - i) operators are appropriately qualified and competent to carry out or supervise treatments;
  - j) 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;
  - k) procedures are established for implementing and documenting calibration and control systems and checking that systems are functioning according to specifications;
  - l) documented procedures and process specifications are available to and understood by relevant staff; and
  - m) 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:
  - a) Description of the rambutan including quantity and distinguishing numbers such as irradiation lot number, specification number or a reference to load configuration;
  - b) Target pests and purpose of treatment (i.e. devitalisation);
  - c) Radiation source and energy level;
  - d) Date of treatment;
  - e) Name of treatment facility;
  - f) Minimum and maximum doses (specified and actual);
  - g) Consignment owner;
  - h) Any deviation from the treatment specification; and
  - i) The name of the PPD-registered officer carrying out or supervising the irradiation treatment.
- (2) Irradiation treatments of rambutan 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 rambutan is stored prior to loading, the rambutan will be stored under conditions that prevent the re-infestation or contamination of the rambutan.

- (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 - F1355 "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 rambutan must be completed and documented for each geometric packing configuration, arrangement and product density used during routine treatments.
- (7) Only MPI-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 rambutan will be treated with irradiation by receiving a minimum absorbed dose of 250 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 rambutan, including:
  - a) a description of the packaged rambutan, including dimensions, density and orientation of product within the package and acceptable variations;
  - b) loading configuration of product within the irradiation container;
  - c) irradiator operating conditions and limits (e.g. beam characteristics, conveyor speed and source configuration);
  - d) conveyor path(s) to be used;
  - e) minimum and maximum doses;
  - f) routine dosimeter monitoring position(s);
  - g) relationship between the dose at the monitoring position(s) and the minimum and maximum doses; and
  - h) where applicable the handling and storage conditions required (e.g. temperature and humidity conditions).