



# *Actinidia* Plants for Planting

MPI.IHS.ACTINIDIA.PFP

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## Draft for Consultation

## TITLE

Import Health Standard: Actinidia Plants for Planting

## COMMENCEMENT

This Import Health Standard comes into force on [Effective Date]

## ISSUING AUTHORITY

This Import Health Standard is issued under section 24A of the Biosecurity Act 1993.

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## Introduction

This introduction is not part of the Import Health Standard (IHS), but is intended to indicate its general effect.

## Purpose

An IHS specifies the requirements for importing risk goods into New Zealand from all countries.

## Background

An IHS issued under the New Zealand Biosecurity Act (the Act) specifies the requirements to be met to effectively manage biosecurity risks associated with importing goods, including the risks from incidentally imported new organisms. IHSs include measures that must be applied in the exporting country before the goods are exported. IHSs also include requirements that must be met by importers during importation including while the goods are in transit and held in a transitional facility (TF), before biosecurity clearance can be given.

Post-clearance conditions may also be specified in an IHS.

Guidance accompanies an IHS as either a separate document or as guidance boxes throughout the IHS itself. Guidance provides information on how the requirements may be met.

## Who should read this?

Anyone who is involved in the process of importing risk goods into New Zealand, or who has an interest in importing risk goods into New Zealand, should read and be familiar with the relevant IHS.

## Why is this important?

It is the responsibility of the importer to ensure that risk goods comply with the requirements of the relevant IHS. Risk goods that do not comply with the requirements of an IHS may not be cleared for entry into New Zealand and may be directed for treatment, re-shipment, destruction or further action deemed appropriate by a Chief Technical Officer (CTO). The pathway may be suspended if certain types of viable regulated pests or viable unwanted organisms are intercepted on the consignment.

Importers are liable for all associated expenses.

## Equivalence

A CTO may consider an application for an equivalent phytosanitary measure to be approved, different from that provided for in this IHS, to maintain at least the same level of protection assured by the current measures.

Equivalence will be considered with reference to the [International Standard for Phytosanitary Measures \(ISPM\) 24: Guidelines for the determination and recognition of equivalence of phytosanitary measures](#).

## Document History

No.	Version Date	Section Changed	Change(s) Description
1			

## **Other information**

Guidance for this Import Health Standard will be provided when this standard is issued.

Draft for Consultation

## Part 1: General requirements

### 1.1 Application

- (1) This import health standard applies to species and hybrids of *Actinidia* plants for planting that are listed as permitted in the [MPI Plants Biosecurity Index \(PBI\)](#).
- (2) The following types of *Actinidia* plants for planting are eligible for import from all countries under this standard:
  - a) tissue cultures;
  - b) dormant cuttings.

### 1.2 Incorporation by reference

- (1) The following documents are incorporated by reference under section 142M of the Act:
  - a) [MPI Biosecurity Organisms Register for Imported Commodities \(BORIC\)](#);
  - b) [MPI Plants Biosecurity Index \(PBI\)](#);
  - c) [MPI Standard PIT-OS-TRA-ACPQF: Accreditation of Offshore Plant Quarantine Facilities and Operators](#);
  - d) [MPI Standard 155.04.03: A standard for diagnostic facilities which undertake the identification of new organisms, excluding animal pathogens](#);
  - e) [ISPM 4: Requirements for the establishment of pest free areas](#). Rome, IPPC, FAO;
  - f) [ISPM 5: Glossary of phytosanitary terms](#). Rome, IPPC, FAO;
  - g) [ISPM 7: Phytosanitary certification system](#). Rome, IPPC, FAO;
  - h) [ISPM 8: Determination of pest status in an area](#). Rome, IPPC, FAO;
  - i) [ISPM 10: Requirements for the establishment of pest free places of production and pest free production sites](#). Rome, IPPC, FAO;
  - j) [ISPM 12: Phytosanitary certificates](#). Rome, IPPC, FAO;
  - k) [ISPM 23: Guidelines for Inspection](#). Rome, IPPC, FAO;
  - l) [ISPM 24: Guidelines for the determination and recognition of equivalence of phytosanitary measures](#). Rome, IPPC, FAO;
  - m) [ISPM 36: Integrated measures for plants for planting](#). Rome, IPPC, FAO.
- (2) Under section 142O(3) of the Act, it is declared that section 142O(1) does not apply, that is, a notice under section 142O(2) of the Act is not required to be published before material that amends or replaces any material incorporated by reference that has legal effect as part of those documents.

### 1.3 Definitions

- (1) Definitions are listed in [Appendix 4](#).

### 1.4 Movement and clearance

- (1) In order for *Actinidia* plants for planting to obtain authorisation for movement to a transitional facility, *Actinidia* plants for planting must:
  - a) meet the requirements of [Part 1](#): and [Part 3](#); and
  - b) meet the requirements of [Part 2.1](#) or [2.2](#).

- (2) In order for *Actinidia* plants for planting to obtain a biosecurity clearance, they must also meet the requirements of Parts 2.3 and 2.4.
- a) There are no further requirements that apply to a tissue culture that is directly traceable to a plant that has been deflasked into a greenhouse and that has met the requirements of Parts 2.3 and 2.4.

## 1.5 Labelling and packaging

- (1) All consignments of *Actinidia* plants for planting must be:
- a) clearly labelled with the full botanical name (genus and species) of all plants; and
- b) shipped in packaging that:
- (i) is clean and free from soil, regulated pests and other regulated articles;
- (ii) prevents the plant material from becoming contaminated with regulated pests or other regulated articles.

## 1.6 Import permit

- (1) An import permit is required for all consignments of *Actinidia* plants for planting.
- (2) The import permit will identify the following:
- a) the regulated pests for which screening is required in New Zealand;
- b) the minimum quarantine period, based on those regulated pests for which screening is required;
- c) the level of post entry quarantine greenhouse and/or tissue culture laboratory in which consignments must be held, based on those regulated pests for which screening is required.

## 1.7 Exporting country system

- (1) Importers may only import *Actinidia* plants for planting from a country where:
- a) the National Plant Protection Organisation (NPPO) has provided evidence to the satisfaction of a CTO that the exporting country has an *Exporting Country System* that complies with ISPM 7: *Phytosanitary certification system*.
- (i) the *Exporting Country System* (including programmes and standards) must demonstrate the process used to provide export assurance.
- (2) Importers may not import from a country where a CTO has determined that the *Exporting Country System* no longer meets the requirements of ISPM 7.

## 1.8 Options for import

- (1) All *Actinidia* plants for planting must be produced using one of the following options:
- a) produced under an *Export Plan* as described in Part 1.8.1; or
- b) produced at an Offshore Facility as described in Part 1.8.2; or
- c) produced in any way other than listed above as described in Part 1.8.3.

### 1.8.1 *Actinidia* plants for planting produced under an *Export Plan*

- (1) Importers may only import *Actinidia* plants for planting produced under an *Export Plan* from a country where an *Export Plan* has been approved by a CTO. The *Export Plan* will detail the activities and processes established to achieve the measures identified in clause 1.8.1(2).

- (2) *Actinidia* plants for planting must meet one of the following measures to manage the risk in relation to each regulated pest ([Appendix 3](#)) listed in the *Export Plan*:
- a) Country freedom: The *Actinidia* plants for planting are sourced from a country for which country freedom has been established in relation to a particular pest in accordance with measures described in ISPM 8: *Determination of pest status in an area* and ISPM 4: *Requirements for the establishment of pest free areas*;
  - b) Pest free area: The *Actinidia* plants for planting are sourced from a pest free area established in accordance with ISPM 4: *Requirements for the establishment of pest free areas*;
  - c) Pest free place of production: The *Actinidia* plants for planting are sourced from a pest free place of production established in accordance with ISPM 10: *Requirements for the establishment of pest free places of production and pest free production sites*;
  - d) Integrated measures for plants for planting: The *Actinidia* plants for planting are sourced from a production site that uses integrated measures for plants for planting in accordance with ISPM 36: *Integrated measures for plants for planting*.
- (3) If a phytosanitary measure is not applied in relation to any regulated pest listed in [Appendix 3](#), this measure must be applied on arrival in New Zealand as described in Part 2.3.

### 1.8.2 *Actinidia* plants for planting produced at an MPI approved offshore facility

- (1) The *Actinidia* plants for planting to be produced at an MPI approved offshore facility must be produced at a facility that meets the requirements of the [MPI Standard PIT-OS-TRA-ACPQF: Accreditation of Offshore Plant Quarantine Facilities and Operators](#).
- (2) All *Actinidia* plants for planting produced at an offshore facility must meet all of the phytosanitary measures described in Part 2.3 in relation to each regulated pest listed in [Appendix 3](#).
- (3) If a phytosanitary measure is not applied in relation to any regulated pest listed in [Appendix 3](#), this measure must be applied on arrival in New Zealand.

### 1.8.3 *Actinidia* plants for planting produced in any other way

- (1) For *Actinidia* plants for planting that are not produced under an *Export Plan* or at an approved offshore facility, all phytosanitary measures described in Parts 2.3 and 2.4 must be applied for each regulated pest listed in [Appendix 3](#) on arrival in New Zealand.

## Part 2: Specific requirements

- (1) All dormant cuttings must meet all requirements described in Part 2.1.
- (2) All tissue cultures must meet all requirements described in Part 2.2.
- (3) All *Actinidia* plants for planting must be screened for each regulated pest listed in Appendix 3, as described in Part 2.3, unless:
  - a) phytosanitary measures in relation to a regulated pest have been applied in accordance with an agreed *Export Plan* or at an MPI approved offshore facility. In this case the import permit will identify the regulated pests for which phytosanitary measures must be applied on arrival in New Zealand.
- (4) All *Actinidia* plants for planting that require phytosanitary measures to be applied on arrival in New Zealand must be held in a post entry quarantine facility approved to the [MPI Facility Standard: Post Entry Quarantine for Plants](#) as described in Part 2.4.

### 2.1 Dormant cuttings

- (1) All dormant cuttings must be:
  - a) imported to generate tissue cultures which will undergo screening for regulated pests as described in Part 2.3;
  - b) free from soil and other regulated articles;
  - c) accompanied by a phytosanitary certificate as described in Part 3.;
  - d) treated for insects and mites prior to export using one of the treatment options listed in Appendix 1 and Appendix 2, respectively. Insect and mite treatments must be applied a maximum of 48 hours prior to shipment;
  - e) imported into a Level 3 tissue culture laboratory approved to the [MPI Facility Standard: Post Entry Quarantine for Plants](#);
  - f) dipped in 1% sodium hypochlorite for a minimum period of 2 minutes on arrival at the tissue culture facility;
  - g) destroyed in the quarantine waste after tissue culture plants have been generated.
- (2) Each tissue culture that is generated from a dormant cutting will be considered as an individual tissue culture plantlet.
- (3) If tissue cultures are sub-cultured before they are transferred to the greenhouse, the process must be done as described in clause 2.2(3).

### 2.2 Tissue cultures

- (1) All tissue cultures must be:
  - a) derived from aerial plant parts;
  - b) grown in a pest proof and transparent vessel;
  - c) grown in a medium free from fungicides, antibiotics and charcoal;
  - d) grown in the vessel in which they will be exported for at least 14 days prior to shipment;
  - e) accompanied by a phytosanitary certificate as described in Part 3.:
- (2) Tissue cultures may be imported directly into a Level 3 tissue culture laboratory approved to the [MPI Facility Standard: Post Entry Quarantine for Plants](#) for sub-culturing before they are transferred to the greenhouse.
- (3) If tissue cultures are sub-cultured before they are transferred to a greenhouse, the following requirements must be met:

- a) at least one sub-culture from each imported tissue culture plant must be developed to the stage where it can be screened for regulated pests after it is deflasked into the greenhouse (see Parts 2.3 and 2.4):
  - (i) this sub-culture should be taken during the first round of multiplication;
  - (ii) if only one plant is obtained during the first round of multiplication, further rounds of multiplication may be undertaken. In this case, a sub-culture for transfer to the greenhouse must be taken from the first round of multiplication where more than one plant is obtained.
- b) surplus sub-cultures that are produced during the round of multiplication used to generate the plant which is transferred to the greenhouse may be retained at the Level 3 tissue culture laboratory throughout the quarantine period as follows:
  - (i) these plants may be sub-cultured and multiplied during the post entry quarantine period;
  - (ii) these plants may also be eligible for biosecurity clearance provided that traceability is maintained as described below.
- c) clear records of traceability must be retained throughout the quarantine period;
- d) only sub-cultures that can be directly traced back to both the original imported tissue culture plant, and the plant that has been transferred to the greenhouse, will be eligible for clearance.

## 2.3 Screening for regulated pests

- (1) To ensure freedom from regulated pests all *Actinidia* plants for planting must be screened for each regulated pest listed in Appendix 3, on arrival in New Zealand as described in this Part unless:
  - a) phytosanitary measures for a particular pest have been applied as described under an agreed *Export Plan* or, at an MPI approved offshore facility. In this case, the import permit will identify the requirements of Part 2.3 that must be applied in New Zealand.

### 2.3.1 Environmental conditions

- (1) Specific environmental conditions must be applied in the first and the second growing seasons, as follows:
  - a) a continuous three month period of spring-like conditions. The daytime temperature range must be between 18°C and 21°C, with a night time temperature range between 15°C and 18°C;
  - b) a continuous four month period of summer-like conditions. The daytime temperature range must be between 21°C and 25°C, and a night time temperature range between 18°C and 21°C (apart from when additional conditions described in clause 2.3.1(3) are applied);
  - c) a continuous two month period of autumn-like conditions, with a daytime temperature range between 15°C and 18°C. Lower temperatures may be applied at night.
- (2) Plants must be held dormant at around 4°C for at least two months between the first and second growing season.
- (3) The following additional environmental conditions must be incorporated into the four month period of summer-like conditions in the first growing season:
  - a) a continuous 28 day period at a minimum relative humidity of 85%, which includes two 48 hour periods of continuous misting. there must be a minimum period of at least two weeks between each misting period;
  - b) a continuous 28 day period with a daytime temperature of 25°C to 30°C and a night time temperature above 20°C. A minimum relative humidity of 85% must be maintained during this time;
- (4) The operating manual for the post entry quarantine facility must describe the environmental conditions that will be applied during each growing season, and how these will be monitored, maintained and recorded.

## 2.3.2 Testing

- (1) All testing must be done at a facility approved to the [MPI Standard 155.04.03: A standard for diagnostic facilities which undertake the identification of new organisms, excluding animal pathogens](#).

### 2.3.2.1 Diagnostic testing

- (1) If a pest is found, or signs or symptoms of a pest are observed during inspections by the facility operator or by the MPI Inspector, samples must be sent for diagnostic testing as described in Part 3.7 of the [MPI Facility Standard: Post Entry Quarantine for Plants](#).

### 2.3.2.2 Pre-determined testing

- (1) Pre-determined testing is required for all regulated pests listed in Table 1.
- (2) All samples for pre-determined testing must be collected during the first growing season according to the schedule shown in Table 1.
- (3) The unit for pre-determined testing is an individual greenhouse plant. Each plant must be labelled individually and tested separately, with the following exception:
  - a) for polymerase chain reaction (PCR) testing, samples taken from up to five plants of the same species can be combined to form a single composite sample for pre-determined testing.

## 2.3.3 Inspection

- (1) All plants must be inspected for signs and symptoms of regulated pests by the facility operator as described in Part 3.6.1 of the [MPI Facility Standard: Post Entry Quarantine for Plants](#).
- (2) All plants must be inspected for signs and symptoms of regulated pests by the MPI Inspector according to the schedule shown in Table 1. A total of ten inspections must be done by the MPI Inspector.
- (3) The operator of the post entry quarantine facility must ensure that the MPI Inspector is notified:
  - a) When plants are deflasked into a greenhouse;
  - b) When deflasked plants start active growth;
  - c) Before the environmental conditions described in clause [2.3.1\(3\)](#) are applied;
  - d) When plants start active growth at the start of the second growing season.

## 2.4 Post entry quarantine greenhouse

- (1) For all *Actinidia* plants for planting, all requirements must be applied as described in this Part, unless:
  - a) phytosanitary measures for a particular pest have been applied as described under an agreed *Export Plan* or at an MPI approved offshore facility. In this case, the import permit will identify the requirements of Part [2.4](#) that must be applied in New Zealand;
- (2) Individual tissue culture plants must be deflasked into a post entry quarantine greenhouse approved to the [MPI Facility Standard: Post Entry Quarantine for Plants](#). The level of greenhouse will be specified on the import permit.
- (3) The total quarantine period will:
  - a) begin after tissue cultures have been deflasked and started active growth;
  - b) be a minimum of 20 months;
  - c) include two distinct growing seasons, each of at least nine months long, with a two month dormancy period in between the first and second growing seasons.

**Table 1: Schedule of inspections by the MPI Inspector and pre-determined testing requirements**

Season		Timing of inspection by MPI Inspector	Pre-determined testing requirements			
			Timing of sample collection	Tissue type	Organism	Test
First growing season	'Spring-like' conditions for three months as described in clause 2.3.1(1)a)	<p><b>Inspection 1</b> Within the first 14 to 28 days of plants being deflasked and starting active growth in the greenhouse.</p> <p><b>Inspection 2</b> Within the last 14 days of the spring-like growth period.</p>	<p><b>Sample set 1</b> Within the last 28 days of the spring-like growth period.</p>	<p><b>Leaf material samples</b> Collected from at least two positions on each stem, including:</p> <ul style="list-style-type: none"> <li>A young fully expanded leaf at the top of the stem</li> <li>An older leaf from a midway position</li> </ul> <p>Leaf petioles and mid veins to be used for testing.</p>	<ul style="list-style-type: none"> <li>Actinidia chlorotic ringspot-associated virus</li> </ul>	PCR
					<ul style="list-style-type: none"> <li>Pelargonium zonate spot virus</li> <li>Tobacco necrotic spot associated virus</li> </ul>	<p>PCR and herbaceous indexing using the indicators <i>Chenopodium quinoa</i>, <i>Nicotiana benthamiana</i>, <i>N. glutinosa</i> and <i>N. tabacum</i></p> <p>PCR</p>
	'Summer-like' conditions for four months as described in clause 2.3.1(1)b)	<p><b>Inspection 3</b> Within the final 14 days of growth between 21°C to 25°C at 85% relative humidity, and after at least one 48 hour misting period, see clause 2.3.1(3)a).</p> <p><b>Inspection 4</b> Within the final 7 days of growth at 25°C to 30 °C, or within 7 days following the completion of this period, see clause 2.3.1(3)b).</p>	<p><b>Sample set 2</b> After at least 28 days growth in the summer period, but before temperatures exceed 25°C.</p>	<p><b>Stem samples</b> Collected from at least two positions on each plant, including:</p> <ul style="list-style-type: none"> <li>One shoot at the base of the plant</li> <li>One shoot in the middle section of the plant</li> </ul> <p>If possible, the minimum length of stem taken from each shoot should be 10 cm.</p>	<ul style="list-style-type: none"> <li><i>Pseudomonas syringae</i> pv. <i>actinidiae</i></li> <li><i>Verticillium nonalfalfae</i></li> </ul>	PCR
					<p>PCR and herbaceous indexing using the indicators <i>Chenopodium quinoa</i>, <i>Nicotiana benthamiana</i>, <i>N. glutinosa</i> and <i>N. tabacum</i></p> <p>PCR or culture based identification method</p>	
		<p><b>Sample set 3</b> Within 14 days of completing growth between 25°C and 30°C.</p>	<p><b>Leaf material samples</b> Collected from at least 2 positions on each stem, including:</p> <ul style="list-style-type: none"> <li>A young fully expanded leaf at the top of the stem</li> </ul>	<ul style="list-style-type: none"> <li>All phytoplasmas</li> <li><i>Pectobacterium carotovorum</i> subsp. <i>actinidiae</i></li> </ul>	<p>PCR</p> <p>PCR or culture based identification method</p>	

				<ul style="list-style-type: none"> <li>An older leaf from a midway position Leaf petioles and mid veins to be used for testing.</li> </ul>		
				<p><b>Stem samples</b> Collected from at least 2 positions on each plant, including:</p> <ul style="list-style-type: none"> <li>One shoot at the base of the plant</li> <li>One shoot in the middle section of the plant</li> </ul> <p>If possible, the minimum length of stem taken from each shoot should be 10 cm.</p>	<p><i>Ceratocystis fimbriata</i></p>	<p>PCR</p>
					<ul style="list-style-type: none"> <li><i>Phytophthora drechsleri</i></li> <li><i>Phytophthora palmivora</i></li> <li><i>Phytophthora helicoides</i></li> <li><i>Phytophthora vexans</i></li> </ul>	<p>PCR or culture based identification method</p>
	<p><b>'Autumn-like' conditions for two months</b> as described in clause 2.3.1(1)c.</p>	<p><b>Inspection 5</b> Within the last 28 days of the period of autumn-like conditions.</p>				
<p><b>Two month dormancy</b> as described in clause 2.3.1(2)</p>						
<p><b>Second growing season</b></p>	<p><b>'Spring-like' conditions</b> as described in clause 2.3.1(1)a.</p>	<p><b>Inspection 6</b> Within the first 14 to 28 days of plants coming out of dormancy.</p> <p><b>Inspection 7</b> Within the last 14 days of the spring growth period.</p>				
	<p><b>'Summer-like' conditions</b> as described in clause 2.3.1(1)b</p>	<p><b>Inspection 8</b> Within the first 14 to 28 days of the summer growth period.</p> <p><b>Inspection 9</b> Within the last 28 days of the summer growth period.</p>				
	<p><b>'Autumn-like' conditions</b> as described in clause 2.3.1(1)c</p>	<p><b>Inspection 10</b> Within the last 28 days of the autumn growth period.</p>				
<p>Pre-determined testing not required in the second growing season</p>						

## Part 3: Phytosanitary inspection and certification

### 3.1 Phytosanitary inspection

- (1) The NPPO of the exporting country must:
  - a) visually inspect each sample unit according to official procedures in accordance with ISPM 23: *Guidelines for Inspection* for all visually detectable pests that are regulated by New Zealand;
  - b) reconcile that the number of units presented for inspection is consistent with documentation;
  - c) verify that traceability labelling is complete; and
  - d) verify that phytosanitary security is maintained for the consignment.
- (2) If pests are found which are not listed in [Appendix 3](#), or in the [MPI Biosecurity Organisms Register for Imported Commodities \(BORIC\)](#), the NPPO must contact MPI to establish their regulatory status before issuing the phytosanitary certificate.
- (3) For plants in tissue culture, the NPPO must verify that:
  - a) the plants were derived from aerial plant parts only.
- (4) For dormant cuttings, the NPPO must verify that:
  - a) the insect and mite treatments have been applied as described in [Part 2.1](#).
- (5) For *Actinidia* plants for planting produced under an *Export Plan*, the NPPO must verify that the *Actinidia* plants for planting are:
  - a) free from regulated pests described in the *Export Plan*; and
  - b) held in a manner to ensure that infestation/reinfestation does not occur following inspection and certification.
- (6) For *Actinidia* plants for planting produced at an MPI approved offshore facility, the NPPO must verify that the *Actinidia* plants for planting are:
  - a) free from regulated pests described in the agreement between MPI and the approved offshore facility; and
  - b) held in a manner to ensure that infestation/reinfestation does not occur following inspection and certification.

### 3.2 Phytosanitary certificate

- (1) All consignments of *Actinidia* plants for planting must be accompanied by a phytosanitary certificate issued by the NPPO of the exporting country in accordance with [ISPM 12: Phytosanitary certificates](#); and must include:
  - a) all relevant additional declaration(s) as described in [Part 3.2.1](#);
  - b) the botanical name of all *Actinidia* plants for planting in the consignment;
  - c) full treatment details in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate (applies to dormant cuttings only, as described in [Part 2.1](#));
  - d) the following declaration:
    - (i) “This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party and to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.”

### 3.2.1 Additional declarations

- (1) The NPPO must include the following additional declarations on the phytosanitary certificate:
  - a) for all tissue cultures:
    - (i) “The *Actinidia* tissue cultures have been derived from aerial plant parts.”
  - b) for all *Actinidia* plants for planting produced under an agreed *Export Plan*:
    - (i) “This consignment was produced and prepared for export in accordance with the agreed *Export Plan*.”
  - c) for all *Actinidia* plants for planting produced at an MPI approved offshore facility:
    - (i) “This consignment was produced and prepared for export in accordance with the agreement between MPI and [list name of approved offshore facility].”

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## Appendix 1: Approved insecticide treatments – *Actinidia* dormant cuttings

(1) One of the treatment options listed below must be applied as described in Part 2.1.

Treatment	Specification																					
Methyl bromide (option 1)	<table border="1"> <thead> <tr> <th>Temperature (°C)</th> <th>Rate (g/m<sup>3</sup>)</th> <th>Minimum duration</th> </tr> </thead> <tbody> <tr> <td>28-32</td> <td>28</td> <td>2 hours</td> </tr> <tr> <td>21-27</td> <td>32</td> <td>2 hours</td> </tr> <tr> <td>16-20</td> <td>40</td> <td>2 hours</td> </tr> <tr> <td>10-15</td> <td>48</td> <td>2 hours</td> </tr> </tbody> </table>	Temperature (°C)	Rate (g/m <sup>3</sup> )	Minimum duration	28-32	28	2 hours	21-27	32	2 hours	16-20	40	2 hours	10-15	48	2 hours						
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28-32	28	2 hours																				
21-27	32	2 hours																				
16-20	40	2 hours																				
10-15	48	2 hours																				
Hot water treatment followed by chemical treatment (option 2)	<p>All treatments must be applied in the following order:</p> <ol style="list-style-type: none"> <li>1) Immersion in water at a minimum continuous temperature of 24°C for a minimum period of 2 hours;</li> <li>2) Immersion in water at a minimum continuous temperature of 45°C for a minimum period of 3 hours;</li> <li>3) Dipping (with agitation) for a minimum of two minutes in chlorpyrifos dip (2.4 g active ingredient per litre, or label rates) containing a non-ionic surfactant. If bubbles are present on the plant surface after the initial two minute period, the immersion period must be extended to a minimum of five minutes.</li> </ol>																					
Chemical treatment (option 3)	<p>All plant material must be either sprayed, or dipped (with agitation), in a solution containing two active ingredients, one from the organophosphorous chemical group and the second from one of the other approved groups listed below;</p> <table border="1"> <thead> <tr> <th>Chemical group</th> <th>Active ingredient</th> <th>Minimum immersion period</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Organophosphorous</td> <td>Chlorpyrifos (0.8 g active ingredient per litre)</td> <td rowspan="2">2 minutes (Non-ionic surfactant required for dips)</td> </tr> <tr> <td>Pirimiphos-methyl (0.475 g active ingredient per litre)</td> </tr> <tr> <td>Carbamate</td> <td>Carbaryl (label rate)</td> <td>2 minutes</td> </tr> <tr> <td>Diacylhydrazine</td> <td>Tebufenozide (label rate)</td> <td>2 minutes</td> </tr> <tr> <td>Spinosyns</td> <td>Spinosad (label rate; treatment must be applied at room temperature)</td> <td>2 minutes</td> </tr> <tr> <td rowspan="2">Pyrethroid</td> <td>Deltamethrin (label rate)</td> <td>15 minutes</td> </tr> <tr> <td>Fenvalerate (label rate)</td> <td>15 minutes</td> </tr> </tbody> </table> <p>If bubbles are present on the plant surface after the initial two minute period, the immersion period must be extended to a minimum of five minutes.</p>	Chemical group	Active ingredient	Minimum immersion period	Organophosphorous	Chlorpyrifos (0.8 g active ingredient per litre)	2 minutes (Non-ionic surfactant required for dips)	Pirimiphos-methyl (0.475 g active ingredient per litre)	Carbamate	Carbaryl (label rate)	2 minutes	Diacylhydrazine	Tebufenozide (label rate)	2 minutes	Spinosyns	Spinosad (label rate; treatment must be applied at room temperature)	2 minutes	Pyrethroid	Deltamethrin (label rate)	15 minutes	Fenvalerate (label rate)	15 minutes
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Pyrethroid	Deltamethrin (label rate)	15 minutes																				
	Fenvalerate (label rate)	15 minutes																				

## Appendix 2: Approved miticide treatments – *Actinidia* dormant cuttings

(1) One of the treatment options listed below must be applied as described in Part 2.1.

Treatment	Specification				
Methyl bromide (option 1)	<b>Temperature (°C)</b>			<b>Rate (g/m<sup>3</sup>)</b>	<b>Minimum duration</b>
	28-32			28	2 hours
	21-27			32	2 hours
	16-20			40	2 hours
	10-15			48	2 hours
Chemical treatment (option 2)	All plant material must be either sprayed, or dipped (with agitation) for a minimum of two minutes, using either option 1 or option 2 described below.				
	<b>Chemical</b>	<b>Chemical Group</b>	<b>Active ingredient</b>	<b>Minimum immersion for dips</b>	
	<b>Option 1</b>	Avermectin	Abemectin (0.009 g active ingredient per litre)	2 minutes (Non-ionic surfactant required for dips)	
	<b>Option 2</b>	Chemical 1: Organophosphorous	Chlorpyrifos (2.4 g active ingredient per litre) Pirimiphos-methyl (0.475 g active ingredient per litre)	2 minutes (Non-ionic surfactant required for dips)	
		Chemical 2: Organochlorine	Dicofol	2 minutes	
If bubbles are present on the plant surface after the initial two minute period, the immersion period must be extended to a minimum of five minutes.					

## Appendix 3: Regulated pest list – *Actinidia* plants for planting

### Fungi

*Ceratocystis fimbriata*  
*Colletotrichum taiwanense*  
*Colletotrichum simmondsii*  
*Corynespora cassicola*  
*Diaporthe tulliensis*  
*Erysiphe actinidiae* var. *actinidiae*  
*Erysiphe actinidiae* var. *argutae*  
*Phyllosticta actinidiae*  
*Pseudocercospora actinidiae*  
*Pseudocercospora hangzhouensis*  
*Pucciniastrum actinidiae*  
*Verticillium nonalfalfae*

### Oomycetes

*Phytophthora drechsleri*  
*Phytophthora palmivora*  
*Phytophthora helicoides*  
*Phytophthora vexans*

### Bacteria

*Acidovorax valerianellae*  
*Pectobacterium carotovorum* subsp. *actinidiae*  
*Pseudomonas syringae* pv. *actinidiae*

### Viruses

*Actinidia chlorotic ringspot-associated virus*  
*Pelargonium zonate spot virus*  
Tomato necrotic spot associated virus

### Phytoplasmas

16Sr1 (aster yellows) group  
16SrXII (stolbur) group  
16SrX (apple proliferation) group

### Guidance

- In future pest lists will be listed in an electronic database (ePest), once this system has been fully tested. In the interim, the pest list has been included as part of the import health standard.

## Appendix 4: Definitions

Definitions have the same meaning as defined by the Act or [ISPM 5: Glossary of phytosanitary terms](#), unless set out below:

### **Biosecurity Organisms Register for Imported Commodities (BORIC)**

MPI database which informs on the quarantine status for an organism as either regulated or non-regulated for New Zealand.

### **Cutting**

A plants for planting commodity sub-class for propagation material from the stem only (no roots).

### **Dormant**

Temporarily inactive/suspended growth (cuttings of deciduous species should have no leaves; bulbs should have no leaves or roots).

### **Import permit**

Official document issued by the Ministry for Primary Industries that authorises import of a commodity in accordance with specified phytosanitary requirements.

{Note: Permits for imports into New Zealand are issued by the Ministry for Primary Industries}.

### **Pest**

Definition as per [ISPM 5: Glossary of phytosanitary terms](#).

### **Regulated Pest**

A quarantine pest or a regulated non-quarantine pest as set out in BORIC.

### **MPI Plants Biosecurity Index (PBI)**

A database of plant species that have been approved for import into New Zealand.

### **Pre-determined testing**

Specific testing for pests and diseases as stated in the import health standard.

### **Tissue culture**

Plants *in vitro* that have been prepared as tissue culture from one parent by asexual reproduction (clonal techniques) under sterile conditions.

### **Viable**

Capable of germination or other means of maintaining life.