

# **MAF BIOSECURITY NEW ZEALAND**

## **STANDARD 155.02.06**

### **Importation of Nursery Stock**

Issued as an import health standard pursuant to section 22 of the Biosecurity Act 1993

**MAF Biosecurity New Zealand**  
**Ministry of Agriculture and Forestry**  
**PO Box 2526**  
**Wellington**  
**New Zealand**



Ministry of Agriculture and Forestry  
Te Manatu Ahuwhenua, Ngāherehere

# CONTENTS

## Endorsement Review Amendment Record

- 1. Introduction**
  - 1.1 Official Contact Point
  - 1.2 Scope
  - 1.3 References
  - 1.4 Definitions and Abbreviations
  - 1.5 General
  - 1.6 Convention on International Trade in Endangered Species
  - 1.7 Equivalence
  
- 2. Import Specification and Entry Conditions**
  - 2.1 Inspection on Arrival and Maximum Pest Limit
  - 2.2 Entry Conditions
    - 2.2.1 Basic Conditions
      - 2.2.1.1 Types of Nursery Stock that may be Imported
      - 2.2.1.2 Import Permit
      - 2.2.1.3 Labelling
      - 2.2.1.4 Cleanliness
      - 2.2.1.5 Phytosanitary Certificate
      - 2.2.1.6 Pesticide treatments for whole plants and cuttings
      - 2.2.1.7 Pesticide treatments for dormant bulbs
      - 2.2.1.8 Measures for *Helicobasidium mompa*
      - 2.2.1.9 Measures for *Phymatotrichopsis omnivore*
      - 2.2.1.10 Measures for *Phytophthora ramorum*
      - 2.2.1.11 Measures for *Xylella fastidiosa*
      - 2.2.1.12 Post-Entry Quarantine (PEQ)
    - 2.2.2 Entry Conditions for Tissue Culture
      - 2.2.2.1 Labelling
      - 2.2.2.2 Cleanliness & Tissue Culture Media
      - 2.2.2.3 Phytosanitary Certificate
      - 2.2.2.4 Inspection on Arrival
    - 2.2.3 Importation of Pollen
    - 2.2.4 Importation of New Organisms
  - 2.3 Compliance Procedures
    - 2.3.1 Validation of Overseas Measures
    - 2.3.2 Treatment and Testing of the Consignment
  - 2.4 New Zealand Nursery Stock Returning from Overseas
  
- 3. Schedule of Special Entry Conditions**
  - 3.1 Special Entry Conditions
  - 3.2 Accreditation of Offshore Plant Quarantine Facilities
  - 3.3 Amendments to the Plants Biosecurity Index

## **ENDORSEMENT**

This Biosecurity New Zealand standard is hereby approved. Pursuant to section 22 of the Biosecurity Act 1993, I hereby issue this document as an import health standard.

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Signature of Group Manager, Plant Imports and Exports Group  
Acting pursuant to delegated Director-General authority

Date: 8 August 2011

## **REVIEW**

This standard is subject to periodic review. Amendments will be made to the signed original as required. The signed original will be held by the Plant Imports and Exports Group, MAF Biosecurity New Zealand, Ministry of Agriculture and Forestry, Pastoral House, 25 The Terrace, Wellington.

## AMENDMENT RECORD

Amendments to this standard will be given a consecutive number and will be dated in the body of the table and in the footer. Brief details of the amended pages are included below.

No:	Details:	Date:
1	Section 2.2.1.7 <i>Pesticide treatments for dormant bulbs</i>	27 April 2005
2	<i>Lilium</i> schedule of special conditions, sections 2.2.1.6, 2.2.1.7 and 2.2.2.	17 June 2005
3	<i>Ficus</i> schedule	6 September 2005
4	<i>Acacia, Acer, Allium, Canna, Cotoneaster, Cycas, Hippeastrum, Hydrangea, Iris,</i> and <i>Lilium</i> schedules	6 October 2005
5	<i>Acacia, Acer, Begonia, Canna, Cotoneaster</i> and <i>Hydrangea</i> schedules, section 2.2.1.7	8 February 2006
6	<i>Acer, Aesculus, Arbutus, Acacia, Calladium, Camellia, Castanea, Gaultheria, Fagus, Kalmia, Photinia, Prunus, Vaccinium</i> schedules, section 2.2.1.10, section 2.2.1.11	22 May 2006
7	<i>Actinidia, Hippeastrum</i> and <i>Prunus</i> schedules	9 August 2006
8	<i>Allium, Fragaria, Hippeastrum, Miscanthus, Solanum tuberosum,</i> and <i>Zantedeschia</i> schedules.	4 August 2008
9	<i>Corylus</i> and <i>Wollemia nobilis</i> schedules.	10 November 2008
10	<i>Allium, Persea, Rubus, Vaccinium,</i> and <i>Vaccinium macrocarpon</i> schedules.	7 April 2009
11	Sections 1.4, 2.2.1.8, 2.2.1.9, 2.2.1.11, 2.2.3, and 3	1 October 2009
12	Section 2.2.1.11	20 October 2009
13	<i>Tulipa</i> schedule	18 January 2010
14	<i>Prunus, Solanum tuberosum,</i> and <i>Vaccinium macrocarpon</i> schedules.	6 July 2010
15	<i>Allium</i> schedule	13 September 2010
16	<i>Berberis, Carpinus, Cotoneaster, Eucalyptus, Nandina, Olea, Populus, Pseudotsuga, Ulmus</i> schedules, section 2.2.1.10 and section 2.2.1.11	7 June 2011
17	<i>Phalaenopsis</i> schedule	8 August 2011
18		
19		

# 1. INTRODUCTION

## 1.1 OFFICIAL CONTACT POINT (NEW ZEALAND NATIONAL PLANT PROTECTION ORGANISATION)

The official contact point in New Zealand for overseas NPPOs is the Ministry of Agriculture and Forestry. All communication pertaining to this import health standard should be addressed to:

Ministry of Agriculture and Forestry  
PO Box 2526  
25 The Terrace  
Wellington  
NEW ZEALAND

Telephone: +64 4 894 5514  
Fax: +64 4 894 0662  
E-mail: [plantimports@maf.govt.nz](mailto:plantimports@maf.govt.nz)  
Website: <http://www.biosecurity.govt.nz>

## 1.2 SCOPE

This standard describes the import specifications and entry conditions for nursery stock imported into New Zealand.

## 1.3 REFERENCES

- Biosecurity Act 1993
- Hazardous Substances and New Organisms Act 1996 (HSNO Act 1996)
- Biosecurity New Zealand Standard PBC-NZ-TRA-PQCON: Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator  
<http://www.biosecurity.govt.nz/border/transitional-facilities/plants/psc-nz-tra-pqcon.htm>
- Biosecurity New Zealand Standard PIT-OS-TRA-ACPQF: Accreditation of Offshore Plant Quarantine Facilities and Operators  
<http://www.biosecurity.govt.nz/border/transitional-facilities/plants/pit-os-tra-acpqf.htm>
- Biosecurity New Zealand Standard 155.04.03: Specification for the Registration of a Plant Pest Diagnostic Laboratory, and Operator  
<http://www.biosecurity.govt.nz/border/transitional-facilities/plants/155-04-03.htm>
- Glossary of phytosanitary terms, 2006. ISPM No 5, FAO, Rome
- Requirements for the establishment of pest free places of production and pest free production sites, 1999. ISPM No 10, FAO, Rome
- Guidelines for phytosanitary certificates, 2001. ISPM No 12, FAO, Rome
- Guidelines for a phytosanitary import regulatory system, 2004. ISPM No 20, FAO, Rome

- Guidelines for the determination and recognition of equivalence of phytosanitary measures, 2005. ISPM No 24, FAO, Rome
- Diagnostic protocols for regulated pests, 2006. ISPM No 27, FAO, Rome

## 1.4 DEFINITIONS AND ABBREVIATIONS

**a.i.:** Active ingredient.

**Basic:** The basic conditions with which all consignments of nursery stock must comply.

**Budwood:** See Cuttings

**Bulb:** A thickened, vegetative part of a plant in a dormant state, e.g., true bulbs, bulbils, corms, tubers and rhizomes.

**Cuttings:** A nursery stock commodity sub-class for propagation material from the stem only (no roots). Cuttings may be required to be dormant.

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

**Environmental Risk Management Authority (ERMA):** Authority responsible for administering the Hazardous Substances and New Organisms Act 1996.

**Genetically Modified Organism:** (as defined by the HSNO Act 1996): Any organism in which any of the genes or any other genetic material:

- has been modified by *in-vitro* techniques; or
- is inherited or otherwise derived, through any number of replications, from any genes or other genetic material which has been modified by *in-vitro* techniques.

**Graftstick:** See Cuttings

**Import health standard:** A standard issued under s22 of the New Zealand Biosecurity Act (1993) by the Director-General on the recommendation of a Chief Technical Officer, specifying the requirements to be met for the effective management of risks associated with the importation of risk goods.

**Import Permit:** Official document authorizing importation of a commodity in accordance with specified phytosanitary requirements (Note: Permits for imports into New Zealand are issued by MAF Biosecurity New Zealand).

**Inspector:** Inspector under the Biosecurity Act 1993.

**International Plant Protection Convention:** International Plant Protection Convention, as deposited with FAO in Rome in 1951 and as subsequently amended [FAO, 1990]

**IPPC:** International Plant Protection Convention

**International Standard for Phytosanitary Measures:** An international standard adopted by the Conference of FAO, the Interim Commission on Phytosanitary Measures or the Commission on Phytosanitary Measures, established under the IPPC [CEPM, 1996; revised CEPM, 1999]

**ISPM:** International Standard for Phytosanitary Measures

**Level 1 (L1), Level 2 (L2) or Level 3 (L3) Quarantine:** A system of post entry quarantine screening whereby nursery stock is grown under certain specified conditions on a property and by a person registered by MAFBNZ (see MAFBNZ Standard PBC-NZ-TRA-PQCON: Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator

**Lot:** A number of units of a single commodity identifiable by its homogeneity of composition, origin etc., forming part of a consignment. [FAO, 1990].

**MAF:** The New Zealand Ministry of Agriculture and Forestry.

**MAFBNZ:** MAF Biosecurity New Zealand, a Directorate of The New Zealand Ministry of Agriculture and Forestry.

**Maximum Pest Limit (MPL):** The maximum level of infestation/contamination allowed within a consignment.

**National Plant Protection Organisation:** Official service established by Government to discharge the functions specified by the IPPC. [FAO, 1990; formerly Plant Protection Organization (National)].

**Non-dormant:** Normal state of plant growth, not in suspended growth.

**NPPO:** National Plant Protection Organisation

**Nursery Stock:** Whole plants or parts of plants imported for growing purposes, e.g. cuttings, scions, budwood, marcots, off-shoots, root divisions, bulbs, corms, tubers, rhizomes, and plants *in vitro*.

**Permit to Import:** See Import permit

**Pest:** Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products [FAO, 1990; revised FAO, 1995; IPPC, 1997]

Note: For the purpose of this standard "pest" includes an organism sometimes associated with the pathway, which poses a risk to human or animal or plant life or health (SPS Article 2).

**Pest free area:** An area in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained [FAO, 1995]

**Pest free place of production:** Place of production in which a specific pest does not occur as

demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained for a defined period [ISPM Pub. No. 10, 1999]

**Phytosanitary Certificate:** Certificate patterned after the model certificates of the IPPC [FAO, 1990]. The certificate must follow the pattern set out in the model phytosanitary certificate, ISPM Pub. No. 12, 2001, “Guidelines for phytosanitary certificate”. The certificate is issued by the exporting country’s NPPO, in accordance with the requirements of the IPPC, to verify that the requirements of the relevant import health standard have been met.

**Plants Biosecurity Index (PBI):** A database of plant species that have been approved by ERMA and may be imported provided they meet certain conditions. The PBI can be found at the following web address: <http://www1.maf.govt.nz/cgi-bin/bioindex/bioindex.pl>

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

**Plants *in vitro*:** A commodity class for plants growing in an aseptic medium in a closed container [FAO, 1990; CEPM, 1999; ICPM, 2002 formerly plants in tissue culture].

**Post Entry Quarantine (PEQ):** The quarantine conditions [Level 3, Level 2, or Level 1 (high or medium security)] under which nursery stock must be grown.

**Quarantine Pests (Regulated Organisms):** Quarantine pests (regulated organisms) are those pests (organisms) for which phytosanitary actions would be undertaken if they were intercepted/detected. These include new organisms as defined by the Hazardous Substances and New Organisms Act 1996.

**Scionwood:** See Cuttings

**Unit:** The basic element selected for sampling. For nursery stock this unit may be a plant, bulb or cutting. For tissue cultures it is the vessel containing the cultures.

**Whole Plants:** A nursery stock commodity sub-class for rooted cuttings and whole plants.

## 1.5 GENERAL

Plant species for which entry conditions or import health standards have been developed are listed alphabetically in MAF’s Plants Biosecurity Index.

If a species is not listed in the Plants Biosecurity Index, it means that conditions for import into New Zealand have not been developed. For new organisms (species), including genetically modified organisms, as defined in the Hazardous Substances and New Organisms Act 1996, an application has to be made to the Environmental Risk Management Authority (ERMA) at the following address:

Environmental Risk Management Authority  
PO Box 131  
Wellington

## NEW ZEALAND

Phone: +64 4 916 2426  
Fax : +64 4 914 0433  
E-mail: [info@ermanz.govt.nz](mailto:info@ermanz.govt.nz)  
Website: <http://www.ermanz.govt.nz>

If a plant species is not included in the Plants Biosecurity Index, but is considered by an importer to be established in New Zealand, the applicant should provide information, including supporting evidence capable of being verified, to ERMA. If ERMA approves an application, MAFBNZ will undertake a pest risk analysis and develop an import health standard in accordance with the requirements of the Biosecurity Act 1993. Pest risk analyses may be undertaken at the importer's expense. For inquiries regarding pest risk analyses, please contact MAF Biosecurity New Zealand at the address given below.

MAF Biosecurity New Zealand can also be contacted for information on permit application procedures and import health standards. Address for Biosecurity New Zealand:

Plant Imports  
Biosecurity New Zealand  
Ministry of Agriculture and Forestry  
P.O. Box 2526  
Wellington  
NEW ZEALAND

Telephone: +64 4 894 0862  
Fax: +64 4 894 0662  
E-mail: [plantimports@maf.govt.nz](mailto:plantimports@maf.govt.nz)  
Website: <http://www.biosecurity.govt.nz>

## 1.6 CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES

The importation of plants and plant products of some plant species is regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), of which New Zealand is a signatory. Regulated plant species, where appropriate, must be accompanied by a valid CITES export permit issued by the appropriate management authority in the country of export. Additional information can be obtained at: <http://www.cites.org>

A CITES import permit, issued by the Department of Conservation, may also be required by New Zealand legislation for specimens of selected species. To confirm whether a specific species requires a CITES import permit, please contact the Department of Conservation (<http://www.doc.govt.nz>).

## 1.7 EQUIVALENCE

It is expected that the product will meet the conditions of this import health standard in every respect. If the product does not comply with the requirements, an application for equivalence

may be submitted to MAF BNZ for consideration prior to importation. This must explain the reason(s) why the consignment may be considered of equivalent phytosanitary status to this import health standard, and what proposal is made to achieve an equivalent phytosanitary status.

## 2. IMPORT SPECIFICATION AND ENTRY CONDITIONS

### 2.1 INSPECTION ON ARRIVAL AND MAXIMUM PEST LIMIT

A randomly drawn sample of 600 units, from each homogenous lot within in a consignment, shall be inspected on arrival. Where a lot is comprised of less than 600 units, 100% inspection is required.

**Infestation by visually detectable quarantine pests on inspection at the border must not exceed the Maximum Pest Limit (MPL) which is currently set at 0.5%.** To achieve a 95% level of confidence that the MPL will not be exceeded, no infested units are permitted in a randomly drawn sample of 600 units (i.e. acceptance number = 0).

### 2.2 ENTRY CONDITIONS

All imported nursery stock must comply with the following requirements:

a) **Basic Conditions** that apply to all nursery stock, as indicated in the Plants Biosecurity Index and outlined in Section 2.2.1 and 2.2.2.

AND

b) **Special Conditions** that apply to particular types of nursery stock, as indicated in the Plants Biosecurity Index and outlined in the **Schedule of Special Conditions**.

#### 2.2.1 Basic Conditions

##### 2.2.1.1 Types of Nursery Stock that may be imported

Nursery stock requiring only basic entry conditions may be imported in any of the following types, as:

- Cuttings (dormant and/or non-dormant)
- Whole Plants
- Dormant Bulbs and Tubers
- Tissue Culture (see section 2.2.2)

##### 2.2.1.2 Import Permit

An import permit is required unless specified otherwise in section 2.2.2 or a schedule of special conditions. To apply for a permit, complete the Form "Application for Permit to Import Nursery Stock" available from the Permit Office or on MAF's website:

<http://www.biosecurity.govt.nz/forms/imports-plants-ai-ns>

The completed form should be returned to the Permit Office who will ensure that the PEQ requirements can be met before issuing an import permit.

##### 2.2.1.3 Labelling

Each type of plant in the consignment must be clearly identified with its scientific name (genus and species).

#### 2.2.1.4 Cleanliness

Only inert/synthetic material may be used for the protection, packaging and shipping materials of the nursery stock. Consignments contaminated with soil shall be treated, reshipped or destroyed. The interception of other extraneous matter, where it cannot be readily removed, may result in reshipment or destruction of the consignment.

#### 2.2.1.5 Phytosanitary Certificate

Consignments must be accompanied by a phytosanitary certificate certifying that the nursery stock has been inspected in the exporting country in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, and conforms with New Zealand's current import requirements. If visually detectable pests are found which are not listed in the import health standard, the certifying NPPO must establish their regulatory status prior to issuing the certificate. This information is available in MAF's "Biosecurity Organisms Register for Imported Commodities":

<http://www.maf.govt.nz/biosecurity/pests-diseases/registers-lists/boric/>

If a visually detectable pest is not listed in this register, the certifying NPPO must contact MAF (see section 1.1) to establish the regulatory status of the pest.

#### 2.2.1.6. Pesticide treatments for whole plants and cuttings

**(a) For whole plants the phytosanitary certificate must have the following additional declaration, unless stated otherwise in the “schedule of special conditions”:**

"The plants were raised from seed/cuttings in soil-less rooting media in containers maintained out of contact with the soil".

OR

"The roots of the plants have been dipped in fenamiphos at 1.6g a.i. per litre of water for 30 minutes".

**(b) All whole plants and cuttings must be treated for insects and mites as follows, unless stated otherwise in the “schedule of special conditions”:**

##### **Insects**

One of the following three treatments is required:

(1) Methyl bromide (dormant material only): fumigation for 2 hours at atmospheric pressure at one of the following combinations of rate ( $\text{g/m}^3$ ) and temperature ( $^{\circ}\text{C}$ ):

<b>Rate (<math>\text{g/m}^3</math>)</b>	<b>Temperature (<math>^{\circ}\text{C}</math>)</b>
48	10 – 15
40	16 – 20
32	21 – 27
28	28 – 32

OR

(2) Hot water treatment/chemical treatment (dormant material only): immersion in hot water at a constant temperature of  $24^{\circ}\text{C}$  for at least 2 hours, followed by immersion in hot water at a constant temperature of at least  $45^{\circ}\text{C}$  for at least 3 hours (period required at the stated

temperatures excluding warm-up times). Immersion in chlorpyrifos dip (2.4 g active ingredient per litre of dip or as per manufacturer's recommendations) containing a non-ionic surfactant for 2 minutes with agitation. The treatment time must be increased to 5 minutes if bubbles remain present on the bulb surface. The dip solution must be used no more than twice or as per manufacturer's recommendations. The chlorpyrifos dip may be incorporated in the hot water treatment.

OR

(3) Chemical treatment: spray, or preferably immerse in a dip(s) with agitation, according to the following conditions. The plants must be sprayed/dipped using two active ingredients chosen from the table below, one belonging to the organophosphorous chemical group and the other from a different group. For dipping, the treatment time is normally 2 minutes (except fenvalerate) but must be increased to 5 minutes if bubbles remain present on the plant surface. Dip solutions must be used no more than twice or as per manufacturer's recommendations. All treatments must be carried out in accordance with manufacturer's recommendations using either the recommended label rate or the rates shown in the table below.

<b>Chemical group</b>	<b>Active ingredient</b>	<b>Dip time</b>	<b>Notes</b>
Carbamate	Carbaryl	2-5 mins	
Diacylhydrazine	Tebufenozide	2-5 mins	
Neonicotinoid	Imidacloprid (0.16 g per litre of dip/spray)	2-5 mins	Non-dormant material only
Neonicotinoid	Thiacloprid (0.16 g per litre of dip/spray)	2-5 mins	Non-dormant material only
Organophosphorous	Acephate (0.75 g per litre of dip/spray)	2-5 mins	Non-dormant material only
Organophosphorous	Chlorpyrifos (2.4 g per litre of dip/spray)	2-5 mins	Non-ionic surfactant required for dipping
Organophosphorous	Dimethoate	2-5 mins	Non-dormant material only
Organophosphorous	Pirimiphos-methyl (0.475 g per litre of dip/spray)	2-5 mins	Non-ionic surfactant required for dipping
Pyrethroid	Deltamethrin	15 mins	
Pyrethroid	Fenvalerate	15 mins	
Spinosyns	Spinosad	2-5 mins	Dip/spray at room temperature

### **Mites**

One of the following two treatments is required:

(1) Methyl bromide (dormant material only): fumigation for 2 hours at atmospheric pressure at one of the combinations of rate ( $\text{g/m}^3$ ) and temperature ( $^{\circ}\text{C}$ ) prescribed for insects above.

OR

(2) Chemical treatment: spray, or preferably immerse in a dip(s) with agitation, according to the following conditions. The plants must be sprayed/dipped using either Abamectin or two active ingredients belonging to different chemical groups chosen from the table below. For dipping, the treatment time is normally 2 minutes but must be increased to 5 minutes if bubbles remain present on the plant surface. Dip solutions must be used no more than twice or as per manufacturer's recommendations. All treatments must be carried out in accordance with manufacturer's recommendations using either the recommended label rate or the rates shown in the table below.

Chemical group	Active ingredient	Dip time	Notes
Avermectin	Abamectin (0.009 g per litre of dip/spray)	2-5 mins	Non-ionic surfactant required for dipping
Organochlorine	Dicofol	2-5 mins	
Organophosphorous	Acephate (0.75 g per litre of dip/spray)	2-5 mins	Non-dormant material only
Organophosphorous	Chlorpyrifos (2.4 g per litre of dip/ spray)	2-5 mins	Non-ionic surfactant required for dipping
Organophosphorous	Dimethoate	2-5 mins	Non-dormant material only
Organophosphorous	Pirimiphos-methyl (0.475 g per litre of dip/spray)	2-5 mins	Non-ionic surfactant required for dipping

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate.

### 2.2.1.7 Pesticide treatments for dormant bulbs

These treatments are only required for dormant bulbs if specifically stated in the “schedule of special conditions” or section 2.4:

#### Insects

One of the following four treatments is required:

(1) Methyl bromide fumigation: fumigation for 2 hours at atmospheric pressure at one of the following combinations of rate ( $\text{g/m}^3$ ) and temperature ( $^{\circ}\text{C}$ ):

Rate ( $\text{g/m}^3$ )	Temperature ( $^{\circ}\text{C}$ )
48	10 – 15
40	16 – 20
32	21 – 27
28	28 – 32

OR

(2) Actellic room fumigation: 10 cc Actellic/10m<sup>3</sup> of room capacity for 12 hours at 20 $^{\circ}\text{C}$  or higher. The first treatment should take place within 14 days after harvesting. Repeat the treatment two more times within an interval of 4 weeks.

OR

(3) Hot water treatment/chemical treatment: immersion in hot water at a constant temperature of 24 $^{\circ}\text{C}$  for 2 hours, followed by immersion in hot water at a constant temperature of 45 $^{\circ}\text{C}$  for 3 hours (period required at the stated temperatures excluding warm-up times). Immersion in chlorpyrifos dip (2.4 g active ingredient per litre of dip) containing a non-ionic surfactant for 2 minutes with agitation. The treatment time must be increased to 5 minutes if bubbles remain present on the bulb surface. The dip solution must be used no more than twice or as per manufacturer's recommendations. The chlorpyrifos dip may be incorporated in the hot water treatment.

OR

(4) Chemical treatment: immersion in a dip(s) containing two active ingredients chosen from the table below, one belonging to the organophosphorous chemical group and the other from a different group, with agitation according to the prescribed conditions. The treatment time is normally 2 minutes but must be increased to 5 minutes if bubbles remain present on the bulb

surface. The dip solution must be used no more than twice or as per manufacturer's recommendations.

<b>Chemical group</b>	<b>Active ingredient</b>	<b>Time</b>	<b>Notes</b>
Neonicotinoid	Thiocloprid/Imidacloprid (0.16 g per litre of dip)	2-5 mins	Non-ionic surfactant required
Organophosphorous	Diazinon (0.5 g per litre of dip)	2-5 mins	-
Organophosphorous	Pirimiphos-methyl (2.5-3.25 g per litre of dip)	2-5 mins	Non-ionic surfactant required
Phenylpyrazole	Fipronil (40 mg per litre of dip)	2-5 mins	Non-ionic surfactant required

### **Mites**

One of the following four treatments is required:

(1) Methyl bromide fumigation: fumigation for 2 hours at atmospheric pressure at one of the combinations of rate ( $\text{g/m}^3$ ) and temperature ( $^{\circ}\text{C}$ ) prescribed for insects above.

OR

(2) Actellic room fumigation: 10 cc Actellic/10m<sup>3</sup> of room capacity for 12 hours at 20°C or higher. The first treatment should take place within 14 days after harvesting. Repeat the treatment two more times within an interval of 4 weeks.

OR

(3) Hot water treatment: immersion in hot water at a constant temperature of 24°C for 2 hours, followed by immersion in hot water at a constant temperature of 45°C for 3 hours (period required at the stated temperatures excluding warm-up times).

OR

(4) Chemical treatment: immersion in a dip(s) with agitation, according to the following conditions. The plants must be sprayed/dipped using either Abamectin or two active ingredients belonging to different chemical groups chosen from the table below. The treatment time is normally 2 minutes but must be increased to 5 minutes if bubbles remain present on the plant surface. Dip solutions must be used no more than twice or as per manufacturer's recommendations. All treatments must be carried out in accordance with manufacturer's recommendations using either the recommended label rate or the rates shown in the table below.

<b>Chemical group</b>	<b>Active ingredient</b>	<b>Dip time</b>	<b>Notes</b>
Avermectin	Abamectin (0.009 g per litre of dip/spray)	2-5 mins	Non-ionic surfactant required for dipping
Organochlorine	Dicofol	2-5 mins	
Organophosphorous	Acephate (0.75 g per litre of dip/spray)	2-5 mins	Non-dormant material only
Organophosphorous	Chlorpyrifos (2.4 g per litre of dip/ spray)	2-5 mins	Non-ionic surfactant required for dipping
Organophosphorous	Dimethoate	2-5 mins	Non-dormant material only
Organophosphorous	Pirimiphos-methyl (0.475 g per litre of dip/spray)	2-5 mins	Non-ionic surfactant required for dipping

## Nematodes

Both of the following treatments are required:

(1) Methyl bromide fumigation: fumigation for 2 hours at atmospheric pressure at one of the combinations of rate (g/m<sup>3</sup>) and temperature (°C) prescribed for insects above;

OR Hot water treatment: immersion in hot water at a constant temperature of 24°C for 2 hours, followed by immersion in hot water at a constant temperature of 45°C for 4 hours (period required at the stated temperatures excluding warm-up times).

AND

(2) Chemical treatment: immersion in fenamiphos (1 g active ingredient per litre of dip) for 1 hour.

## Fungi

Both of the following treatments are required:

(1) Chemical treatment: immersion in a dip containing one of the following active ingredients, with agitation according to the prescribed conditions. The dip solution must be used no more than twice or as per manufacturer's recommendations. All treatments must be carried out in accordance with manufacturer's recommendations using either the recommended label rate or the rates shown in the table below.

<b>Active ingredient</b>	<b>Dip time</b>	<b>Notes</b>
Bromo-chloro-dimethylhydantoin (8.1-16 g per litre of dip)	5 mins	
Formaldehyde (0.4%)	2 hours	Dip at room temperature
Peroxyacetic acid (80 ppm)	5 mins	Dip at room temperature Wetting agent required
Sodium hypochlorite (10%), pH 6.5-7	5 mins	Dip at room temperature

AND

(2) Hot water treatment/chemical treatment: immersion in hot water at a constant temperature of 24°C for 2 hours, followed by immersion in hot water at a constant temperature of 45°C for 3 hours (period required at the stated temperatures excluding warm-up times). Immersion in thiabendazole dip (1-1.3 g active ingredient per litre of dip) containing a wetting agent for 15-30 minutes with agitation. The dip solution must be used no more than twice or as per manufacturer's recommendations. The thiabendazole dip may be incorporated in the hot water treatment;

OR Chemical treatment: immersion in a dip(s) containing two active ingredients belonging to different chemical groups chosen from the table below, with agitation according to the prescribed conditions. The dip solution must be used no more than twice or as per manufacturer's recommendations. All treatments must be carried out in accordance with manufacturer's recommendations using either the recommended label rate or the rates shown in the table below.

<b>Chemical group</b>	<b>Active ingredient</b>	<b>Dip time</b>	<b>Notes</b>
Benzimidazole	Thiabendazole (1-1.3 g per litre of dip)	15-30 mins	Dip at room temperature Wetting agent required
Benzimidazole	Thiophanate-methyl (0.75 g per litre of dip)	15-30 mins	Dip at 27-29.5°C
Dimethyldithio-carbamate	Thiram (11.2 g per litre of dip)	-	Dip at room temperature
Imidazole	Prochloraz (0.25 g per litre of dip)	15 mins	Dip at room temperature
Strobilurin	Azoxystrobin (0.95 g per litre of dip)	15 mins	Dip at room temperature

If satisfied that the pre-shipment activities have been undertaken, the exporting country

NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate.

### 2.2.1.8 Measures for *Helicobasidium mompa*

***ALL species of nursery stock (whole plants, cuttings, and dormant bulbs) from the listed countries must meet the requirements of this section, unless stated otherwise in the “schedule of special conditions”.***

#### **A. For nursery stock from the following countries:**

Afghanistan	Iraq	Nepal	Sri Lanka
Armenia	Israel	Oman	Syria
Bangladesh	Jordan	Pakistan	Turkey
Bhutan	Kuwait	Philippines	United Arab Emirates
Brunei	Laos	Saudi Arabia	Vietnam
Cambodia	Lebanon	Singapore	Yemen
Iran	Myanmar		

#### **For whole plants, cuttings and dormant bulbs:**

- (i) the phytosanitary certificate must have the following additional declaration:  
"The nursery stock has been sourced from a “Pest free area”, free from *Helicobasidium mompa*".

#### **B. For nursery stock from the following countries:**

Azerbaijan	Kazakhstan	Russia	Turkmenistan
China	Kyrgyzstan	South Africa	Uganda
Georgia	Malawi	South Korea	Uzbekistan
India	Malaysia	Taiwan	
Indonesia	Mongolia	Tajikistan	
Japan	North Korea	Thailand	

#### **a) For dormant bulbs:**

- (i) the phytosanitary certificate must have the following additional declaration:  
"The dormant bulbs have been sourced from a “Pest free area” or “Pest free place of production”, free from *Helicobasidium mompa*"

#### **b) For whole plants and cuttings:**

- (i) the phytosanitary certificate must have the following additional declaration:  
"The nursery stock has been sourced from a “Pest free area” or “Pest free place of production”, free from *Helicobasidium mompa*"

AND

- (ii) the consignment must be treated for the fungus as follows, unless the nursery stock requires Level 3 PEQ as stated in the “schedule of special conditions”.

Both of the following treatments are required:

- (1) Chemical treatment: spray, or preferably immerse in a dip(s) with agitation, using one of the following active ingredients according to the following conditions. For dipping, the treatment time is 5 minutes. Dip solutions must be used no more than twice or as per manufacturer's recommendations. All treatments must be carried out in accordance with

manufacturer's recommendations using either the recommended label rate or the rates shown in the table below.

Active ingredient	Dip time	Notes
Bromo-chloro-dimethylhydantoin (8.1-16 mg per litre of dip/spray)	5 mins	
Peroxyacetic acid (80 ppm)	5 mins	Dip at room temperature Wetting agent required
Sodium hypochlorite (10%), pH 6.5-7	5 mins	Dip at room temperature

AND

(2) Hot water treatment/chemical treatment (dormant material only): immersion in hot water at a constant temperature of 24°C for 2 hours, followed by immersion in hot water at a constant temperature of 45°C for 3 hours (period required at the stated temperatures excluding warm-up times). Immersion in thiabendazole dip (1-1.3 g active ingredient per litre of dip) containing a wetting agent for 15-30 minutes with agitation. The dip solution must be used no more than twice or as per manufacturer's recommendations. The thiabendazole dip may be incorporated in the hot water treatment;

OR Chemical treatment: spray, or preferably immerse in a dip(s) with agitation, according to the following conditions. The plants must be sprayed/dipped using two active ingredients belonging to different chemical groups chosen from the table below. Dip solutions must be used no more than twice or as per manufacturer's recommendations. All treatments must be carried out in accordance with manufacturer's recommendations using either the recommended label rate or the rates shown in the table below.

Chemical group	Active ingredient	Dip time	Notes
Anilinopyrimidine	Pyrimethanil	15 mins	Dip at room temperature
Benzimidole	Carbendazim (1 g per litre of dip/spray)	20 mins	
Benzimidole	Thiophanate-methyl	10-15 mins	
Chloronitrile	Chlorothalonil	15 mins	Dip at room temperature
Dicarboximide	Iprodione (2 g per litre of dip/spray)	30 mins	
Dimethyldithio-carbamate	Thiram (11.2 g per litre of dip)	-	Dip at room temperature
Phenylurea	Pencycuron	15 mins	
Phosphonate	Fosetyl-aluminium	15 mins	Dip at room temperature
Strobilurin	Azoxystrobin (0.95 g per litre of dip)	15 mins	Dip at room temperature
Triazole	Propiconazole (0.5 g per litre of dip)	5 mins	

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the "Disinfestation and/or Disinfection Treatment" section of the phytosanitary certificate.

### 2.2.1.9 Measures for *Phymatotrichopsis omnivora*

***ALL species of whole plants from the listed countries must meet the requirements of this section.***

For whole plants (not cuttings, dormant bulbs or tissue culture) from Brazil, Mexico, the United States of America or Venezuela, the phytosanitary certificate must have the following additional declaration:

"The nursery stock has been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*".

#### 2.2.1.10 Measures for *Phytophthora ramorum*

*All nursery stock imported under the schedules listed below, as well as the additional listed genera and/or species/cultivars, are potential of Phytophthora ramorum and must meet the requirements specified in this section.*

*All species imported under the following schedules must meet the requirements for Phytophthora ramorum identified in this section:*

- *Abies*
- *Acer*
- *Aesculus*
- *Arbutus*
- *Berberis*
- *Carpinus*
- *Castanea*
- *Corylus*
- *Cotoneaster*
- *Eucalyptus*
- *Fagus*
- *Gaultheria*
- *Kalmia*
- *Lithocarpus*
- *Olea*
- *Photinia*
- *Populus*
- *Prunus*
- *Pseudotsuga*
- *Quercus*
- *Rhododendron*
- *Rubus*
- *Salix*
- *Ulmus*
- *Vaccinium*
- *Viburnum*

*All species of the following genera must meet the requirements for Phytophthora ramorum identified in this section:*

- *Alnus*
- *Annona*
- *Betula*
- *Buddleja*
- *Celtis*
- *Cercis*
- *Ceratonia*
- *Chamaecyparis*
- *Chimaphila*
- *Choisya*
- *Cistus*
- *Citrus*
- *Clematis*
- *Cornus*
- *Corylopsis*
- *Distylium*
- *Empetrum*
- *Erica*
- *Garrya*
- *Gevuina*
- *Grevillea*
- *Ilex*
- *Fuchsia*
- *Hedera*
- *Hydrangea*
- *Larix*
- *Liriodendron*
- *Loropetalum*
- *Mahonia*
- *Malus*
- *Manglietia*
- *Nerium*
- *Picea*
- *Pistacia*
- *Ribes*
- *Robinia*
- *Rosa* cultivar Pink Meidiland
- *Rosa* cultivar Pink Sevillana
- *Rosa* cultivar Royal Bonica
- *Rosa* *gymnocarpa*
- *Rosa* *rugosa*
- *Rosa* *sempervirens*
- *Sambucus*
- *Tilia*
- *Zenobia*
- *Tsuga*

**i) For countries recognised by MAF as free of *P. ramorum***

The following Additional Declaration shall be endorsed on the phytosanitary certificate:

"The plants have been sourced from a "Pest free area", free from *Phytophthora*

*ramorum*”

Note: The following countries are presently recognised by MAF as free of *Phytophthora ramorum*:  
Australia, Israel, Japan, and South Africa.

**ii) For countries with MAF approved programs (see below)**

The following Additional Declaration shall be endorsed on the phytosanitary certificate:

“The plants have been sourced from a NZ MAF approved Pest Free Place of Production for *Phytophthora ramorum*”

Note: No countries presently have MAF approved Pest Free Place of Production programmes for *Phytophthora ramorum*.

Countries wishing to export *P. ramorum* host material to New Zealand under option ii are required to develop a *P. ramorum* pest free place of production program and present it to MAF for evaluation. Prior to accepting a program MAF Plant Imports will evaluate whether they meet the criteria below:

- systems to establish and maintain pest freedom;
- systems to establish and maintain an appropriate buffer zone (as defined by ISPM 10);
- verification that pest freedom has been attained or maintained. This must include laboratory testing of propagative material, water, soil or other growing media, and other material coming into contact with propagative material; and
- product identity, consignment integrity and phytosanitary security.

**iii) For nursery stock sourced from MAF approved offshore facilities**

Specific measures are detailed in the agreement between MAF and the approved facility.

**2.2.1.11 Measures for *Xylella fastidiosa***

***All species imported under the following schedules must meet the requirements for *Xylella fastidiosa* identified in this section:***

- |                    |                    |                  |
|--------------------|--------------------|------------------|
| • <i>Acer</i>      | • <i>Eugenia</i>   | • <i>Prunus</i>  |
| • <i>Aesculus</i>  | • <i>Hydrangea</i> | • <i>Quercus</i> |
| • <i>Acacia</i>    | • <i>Juglans</i>   | • <i>Rubus</i>   |
| • <i>Canna</i>     | • <i>Nandina</i>   | • <i>Salix</i>   |
| • <i>Castanea</i>  | • <i>Persea</i>    | • <i>Ulmus</i>   |
| • <i>Citrus</i>    | • <i>Populus</i>   | • <i>Vitis</i>   |
| • <i>Diospyros</i> |                    |                  |

***All of the following species must meet the requirements for *Xylella fastidiosa* identified in this section:***

- |                              |                                  |                                  |
|------------------------------|----------------------------------|----------------------------------|
| • <i>Carya illinoensis</i>   | • <i>Ginkgo biloba</i>           | • <i>Liquidambar styraciflua</i> |
| • <i>Catharanthus roseus</i> | • <i>Hemerocallis spp.</i>       | • <i>Magnolia grandiflora</i>    |
| • <i>Cercis occidentalis</i> | • <i>Jacaranda mimosaeifolia</i> | • <i>Myrica cerifera</i>         |
| • <i>Crepis capillaris</i>   | • <i>Juniperus ashei</i>         | • <i>Photinia arbutifolia</i>    |

- *Ficus carica*
- *Koelreuteria paniculata*
- *Olea europaea*
- *Fragaria vesca*
- *Lagerstroemia indica*

**i) For countries recognized by MAF as free from *Xylella fastidiosa***

The following Additional Declaration shall be endorsed on the phytosanitary certificate:

“The plants have been sourced from a country free from *Xylella fastidiosa*”

Note: Countries where *Xylella fastidiosa* is known to be present:

Argentina, Belize, the Caribbean Islands, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, United States of America, Venezuela and Yugoslavia

**ii) For all other countries**

Additional Declaration:

“The plants have been sourced from a state/province free or Pest Free Place of Production from *Xylella fastidiosa*”

**AND**

The plants must be tested for *Xylella fastidiosa* by during the Post Entry Quarantine period, at MAF approved diagnostic facility.

**iii) For nursery stock sourced from MAF approved offshore facilities**

Specific measures are detailed in the agreement between MAF and the approved facility.

**2.2.1.12 Post-Entry Quarantine (PEQ)**

Following arrival in New Zealand all nursery stock, unless specified in section 2.2.2 or the schedules of special entry conditions, must undergo a period of post entry quarantine in order to check for the presence of regulated pests and/or diseases. Post-entry quarantine will be carried out in a transitional facility registered in accordance with Biosecurity New Zealand Standard PBC-NZ-TRA-PQCON: Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator.

The quarantine period will be a minimum of 3 months, unless otherwise stated in the schedule of special entry conditions. The nursery stock must be actively growing throughout this period. The quarantine period may be extended if material is slow growing, pests and diseases are detected or treatments required. The MAF Inspector has full authority to determine when the plant material may receive biosecurity clearance.

A list of MAF-accredited post entry quarantine facilities is available on MAF’s website:

<http://www.biosecurity.govt.nz/regs/imports/plants/post-entry>

**2.2.2 ENTRY CONDITIONS FOR TISSUE CULTURE**

### **2.2.2.1 Labelling**

Cultures must be clearly identified with their scientific name (genus and species).

### **2.2.2.2 Cleanliness & Tissue Culture Media**

Cultures imported in growing media must have been grown in the vessel in which they are imported. The container must be pest-proof, rigid, and either clear plastic or glass. The tissue culture media must not contain fungicides or antibiotics. Plants in tissue culture must be produced in a facility under conditions that prevent contamination with regulated pests.

### **2.2.2.3 Phytosanitary Certificate**

Cultures must be accompanied by a phytosanitary certificate, certifying that the nursery stock has been inspected in the exporting country according to appropriate procedures and conforms with New Zealand's current entry conditions.

For **plantlets recently removed from *in-vitro* tissue culture**, the following additional declaration must be identified upon the phytosanitary certificate:

"These plantlets were removed from the original culture container(s) in which they were grown, not more than 48 hours before export, and have not been in contact with any other growing media".

### **2.2.2.4 Import Permit**

An import permit is not required for tissue culture unless the schedule of special conditions specifies that these cultures require post entry quarantine.

### **2.2.2.5 Inspection on Arrival**

Visual inspection of the tissue culture upon arrival in New Zealand will determine if the tissue culture shows any signs of contamination (e.g. cloudy agar, fungal spores or bacterial growth). If contamination is observed the importer will be given the option of reshipment or destruction of the consignment.

## **2.2.3 IMPORTATION OF POLLEN**

An import permit must be obtained from MAFBNZ prior to import.

Prior to issuing the permit to import, MAFBNZ will assess, on a case by case basis, the requirements that must be met to import the pollen. All import requirements will be detailed on the permit to import.

## **2.2.4 IMPORTATION OF NEW ORGANISMS**

Proposals for the deliberate introduction of new organisms as defined by the Hazardous Substances and New Organisms Act 1996 should be referred to the Environmental Risk

Management Authority (see section 1.5).

## **2.3 COMPLIANCE PROCEDURES**

On arrival in New Zealand all documentation associated with the importation will be inspected by an inspector to ensure compliance. The nursery stock will be inspected using a randomly selected minimum 600 unit sample, to ensure that it complies with the entry conditions.

If organisms are detected that cannot be identified, they will be treated as regulated organisms. If the number of units infested with quarantine pests exceeds the acceptance number, the nursery stock will be treated, reshipped or destroyed as directed by the inspector, at the expense of the importer.

### **2.3.1 VALIDATION OF OVERSEAS MEASURES**

For all imported nursery stock, MAF reserves the right to validate all measures that are undertaken overseas. This includes measures undertaken by national plant protection organisations, MAF-accredited facilities offshore and within New Zealand. Audits will be conducted on a regular basis and at the expense of the importer.

### **2.3.2 TREATMENT AND TESTING OF THE CONSIGNMENT**

All pesticide treatments must be carried out in accordance with manufacturer's recommendations, including labeling of the treated plant commodity with the name of the active ingredient used and any handling requirements.

Upon arrival and following inspection at the border, if any required treatment(s) or testing of the consignment has not been completed within the prescribed period, these measures may be completed in New Zealand where such services are available, and by prior arrangement with MAF. All testing and treatment in New Zealand must be completed in MAF-accredited facilities, accredited to MAF standards 155.04.03: Specification for the Registration of a Plant Pest Diagnostic Laboratory, and Operator and BMG-STD-TREAT: Approval of Suppliers Providing Treatment of Imported Risk Goods and Forestry/Plant Related Material for Export, respectively.

## **2.4 NEW ZEALAND NURSERY STOCK RETURNING FROM OVERSEAS**

All returning product of New Zealand origin will be regarded as offshore nursery stock and must meet the requirements of the import health standard or be reshipped or destroyed, except under the following circumstances:

**(i) Nursery stock “unopened” offshore**

Product in its original pest-proof container with the original seals intact is permitted entry subject to a product reconciliation check on arrival to verify that it is New Zealand produce.

**(ii) Nursery stock “opened” offshore**

Nursery stock inspected offshore, and rejected for any reason, is permitted entry subject to the following:

- (a) verification that the nursery stock was either returned to its original pest-proof container and resealed immediately after inspection or stored in pest-proof facilities prior to re-export; and
- (b) the consignment was reshipped back to New Zealand by the first available means; and
- (c) inspection, clearance and reconciliation of the consignment on arrival in New Zealand as per section 2 of this standard; and
- (d) treatment with a generic insecticide and miticide as per sections 2.2.1.6 (whole plants and cuttings) or 2.2.1.7 (dormant bulbs) of this standard.

### **3. SCHEDULE OF SPECIAL ENTRY CONDITIONS**

#### **3.1 SPECIAL ENTRY CONDITIONS**

Plant genera listed in these schedules have entry requirements that differ in some way from the **Basic Conditions** (Section 2.2.1.). Differences may involve:

- special isolation requirements
- special treatment requirements
- minimum quarantine period
- a requirement for Level 3 Quarantine
- special phytosanitary certificate additional declarations

All consignments must meet the **Basic Conditions** in Section 2.2.1 and 2.2.2 unless a variation to these conditions is specified in the schedule.

#### **3.2 ACCREDITATION OF OFFSHORE PLANT QUARANTINE FACILITIES**

Nursery stock normally subject to post-entry quarantine may be imported from MAF-accredited (registered) facilities overseas under predetermined conditions, with a reduced PEQ requirement following arrival in New Zealand. Overseas facilities must be accredited by MAF according to MAF Standard PIT-OS-TRA-ACPQF: Accreditation of Offshore Plant Quarantine Facilities and Operators. A list of MAF-accredited offshore facilities is available on MAF’s website:

<http://www.biosecurity.govt.nz/regs/imports/plants/off-shore>

### **3.3 AMENDMENTS TO THE PLANTS BIOSECURITY INDEX**

The Plants Biosecurity Index will be further updated with plant species assessed by ERMA as being either “not new organisms” or approved for entry into New Zealand.

The Plants Biosecurity Index will be continuously updated on MAF’s website:

<http://www1.maf.govt.nz/cgi-bin/bioindex/bioindex.pl>

The information provided within the website copy of the Plants Biosecurity Index is only intended to be general information to the public. It is not intended to take the place of, or to represent, the written law of New Zealand or other official guidelines or requirements. Web site users are advised to contact Biosecurity New Zealand to confirm import status.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Abies*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Bursaphelenchus* spp.; *Lophodermium* spp.; *Phytophthora ramorum*, Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 6 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

## *Acacia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Acacia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Xylella fastidiosa*

#### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

##### **A. For Cuttings and Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

##### **B. For Plants in Tissue Culture from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Acca sellowiana*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Acca sellowiana*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Luxembourg, Norway, The Netherlands, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Puccinia psidii*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

#### **Additional Declaration:**

"*Puccinia psidii* is not known to occur in \_\_\_\_\_ (the country or state of origin) \_\_\_\_\_".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Acer*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Cryphonectria parasitica*; *Phytophthora ramorum*; *Xylella fastidiosa*

**Entry Conditions:** Basic; with variations and additional conditions as specified below:

**A. For Cuttings and Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10), and
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.11), and
- c. Conditions for *Cryphonectria parasitica*

**Additional Declaration:** “*Cryphonectria parasitica* is not known to occur in \_\_\_\_\_ (the country or state where the plants/cuttings were produced) ”.

**OR**

**PEQ:** Level 3

**Minimum Period:** 6 months

**B. For Plants in Tissue Culture from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Acrocomia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Acrocomia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Hawaii, mainland USA

**Quarantine Pests:** Lethal yellowing; cadang-cadang

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**PEQ:** Level 2

**Minimum Period:** 3 months

**Height Limit:** Plants must not exceed 1.5m in height

### **Additional Declaration:**

"Cadang cadang and lethal yellowing are not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

## *Actinidia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Actinidia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **1. Type of *Actinidia* nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

### **2. Pests of *Actinidia***

Refer to the pest list.

### **3. Entry conditions for:**

#### **3.1 *Actinidia* cuttings and tissue culture from any country**

##### **(i) Documentation**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Actinidia* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

##### **(ii) Phytosanitary requirements**

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Actinidia* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

##### **(iii) Additional declarations to the phytosanitary certificate**

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section [cuttings only]. No additional declarations are required.

##### **(iv) Special tissue culture media requirements**

The tissue culture media must not contain charcoal.

##### **(v) Post-entry quarantine**

**PEQ:** All *Actinidia* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** The nursery stock will be grown for a minimum period of 6 months in post-entry quarantine and will be inspected, treated and/or tested for regulated pests as specified in the “Inspection, Testing and Treatment Requirements for *Actinidia*”, at the expense of the importer. Six months is an

indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

## Pest List for *Actinidia*

### REGULATED PESTS (actionable)

#### Insect

#### Insecta

##### Coleoptera

##### Curculionidae

*Otiorhynchus salicicola*

weevil

##### Hemiptera

##### Miridae

*Adelphocoris lineolatus*

alfalfa plant bug

##### Homoptera

##### Cicadellidae

*Empoasca vitis*

grape leafhopper

##### Coccidae

*Ceroplastes rusci*

fig wax scale

##### Diaspididae

*Pseudaulacaspis pentagona*

white peach scale

##### Lepidoptera

##### Tortricidae

*Lobesia botrana*

grape berry moth

*Proeulia auraria*

grapevine leafroller

*Proeulia chrysopteris*

grapevine leaf-rolling tortricid

##### Thysanoptera

##### Thripidae

*Scirtothrips dorsalis*

chilli thrips

#### Mite

#### Arachnida

##### Acarina

##### Tenuipalpidae

*Brevipalpus chilensis*

false spider mite

#### Fungus

#### Ascomycota

##### Hypocreales

##### Hypocreaceae

*Calonectria ilicicola* (anamorph *Cylindrocladium parasiticum*)

root and stem rot

#### mitosporic fungi (Coelomycetes)

##### Sphaeropsidales

##### Sphaerioidaceae

*Phyllosticta actinidiae*

Brown leaf spot

#### Basidiomycota: Basidiomycetes

##### Agaricales

##### Tricholomataceae

*Armillaria mellea* (anamorph *Rhizomorpha subcorticalis*)

armillaria root rot

#### Bacterium

##### Pseudomonadaceae

*Pseudomonas syringae* pv. *actinidiae*

bacterial canker

**Virus**

*Apple stem grooving virus* [*Actinidia* infecting strain] -  
uncharacterised tobamovirus -

**Disease of unknown aetiology**

Chlorotic disease of kiwifruit -

## Inspection, Testing and Treatment Requirements for *Actinidia*

ORGANISM TYPES	NZ MAF ACCEPTABLE METHODS (See notes below)
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions) [cuttings only]
<b>Mite</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions) [cuttings only] or binocular microscope inspection in PEQ [plants in tissue culture only]
<b>Fungi</b>	
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	Growing season inspection in PEQ for disease symptom expression.
<i>Calonectria ilicicola</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Phyllosticta actinidiae</i>	Growing season inspection in PEQ for disease symptom expression.
<b>Bacterium</b>	
<i>Pseudomonas syringae</i> <i>pv. actinidiae</i>	PCR using the PAV 1/P 22 primers (Scortichinia et al., 2002)
<b>Virus</b>	
<i>Apple stem grooving virus</i> [ <i>Actinidia</i> infecting strain]	ELISA or PCR (Clover <i>et al.</i> , 2003), AND herbaceous indicators Cq, Nb, Ng, No and Pv AND TEM.
uncharacterised tobamovirus	Herbaceous indicators Cq, Nb, Ng, No and Pv AND TEM.
<b>Disease of unknown aetiology</b>	
Chlorotic disease of kiwifruit	Growing season inspection in PEQ for disease symptom expression.

### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. Transmission electron microscopy (TEM) – each plant must be observed under the TEM for virus particles.
3. Indicator hosts: *Chenopodium quinoa* (Cq), and *Nicotiana benthamiana* (Nb), *N. occidentalis* cv. 37B (No), *N. glutinosa* (Ng) and *Phaseolus vulgaris* cv. Prince (Pv). At least two plants of each indicator species must be used in mechanical inoculation tests.
4. Indicator plants must be grown under appropriate temperatures and must be shaded for 24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
5. Enzyme linked immunosorbent assay (ELISA); Polymerase chain reaction (PCR).
6. Testing must be carried out on *Actinidia* plants while they are in active growth. For bioassay and ELISA, plants shall be sampled from at least two positions including a young, fully expanded leaf at the top of the stem and an older leaf from a midway position.
7. PCR and ELISA must be validated using positive controls/reference material prior to use in quarantine testing.
8. Positive and negative controls must be used in ELISA tests.
9. Positive and negative controls (including a blank water control) must be used in PCR. Ideally positive internal controls and a negative plant control should be used. Internal controls in PCR tests are important to avoid the risk of false negatives.
10. Inspect *Actinidia* plants for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.
11. With prior notification, MAF will accept other internationally recognised testing methods.

## References

Clover, G.R.G., Pearson, M.N., Elliott, D.R., Tang, Z., Smales, T.E. and Alexander, B.J.R. (2003). Characterization of a strain of *Apple stem grooving virus* in *Actinidia chinensis* from China. *Plant Pathology* **52**: 371-378.

## *Aesculus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Aesculus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Phytophthora ramorum*; *Xylella fastidiosa*

#### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

#### **B. For Plants in Tissue Culture from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Agonis*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Agonis*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** No specific pests identified

#### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

##### **A. For Cuttings and Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Prophylactic treatment for *Puccinia psidii*:  
Treatment with a fungicide deemed effective against rust fungi by exporting NPPO.  
Treatment details must be specified in the treatment section of the phytosanitary certificate.

##### **B. For Plants in Tissue Culture from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Allium*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Allium* nursery stock approved for entry into New Zealand**

Dormant bulbs

Plants in tissue culture

**2. Pests of *Allium***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Allium* dormant bulbs from any country**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Allium* dormant bulbs have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a “Pest free area” (country freedom), free from regulated nematodes and fungi OR treated for regulated nematodes and fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- treated for regulated insects and mites as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “pest free area” (country freedom) free from the organisms listed below:
  - **Phytoplasmas:**  
Aster yellows phytoplasma, Garlic decline phytoplasma, and Onion yellows phytoplasma.
  - **Viruses:**  
*Garlic dwarf virus, Garlic mite-borne latent virus, Garlic virus X, Onion mite-borne latent virus, Shallot yellow stripe virus, Sint-Jan's onion latent virus, Tobacco rattle virus, and Tomato black ring virus.*
  - **Bacteria:**  
*Erwinia chrysanthemi* pv. *Chrysanthemi*, *Burkholderia cepacia*, and *Pseudomonas xanthochlora*.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section and by endorsing the following additional declarations to the phytosanitary certificate:

“The *Allium* dormant bulbs in this consignment have been sourced:

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi [if applicable].

AND

- from a “Pest free area” (country freedom), free from regulated phytoplasmas (Aster yellows phytoplasma, Garlic decline phytoplasma, Onion yellows phytoplasma), viruses (Garlic dwarf virus, Garlic mite-borne latent virus, Garlic virus X, Onion mite-borne latent virus, Shallot yellow stripe virus, Sint-Jan's onion latent virus, Tobacco rattle virus, Tomato black ring virus), and bacteria (*Erwinia chrysanthemi* pv. *Chrysanthemi*, *Burkholderia cepacia* and *Pseudomonas xanthochlora*.)”

(v) Post-entry quarantine

**PEQ:** Level 2

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Six months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

(vi) Assessment of Equivalent Phytosanitary Status

Where the pre-export phytosanitary requirements (part ii) can not be met, a request for assessment of equivalent phytosanitary status can be made to MAF.

### 3.2 *Allium* plants in tissue culture from any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** a import permit is required.

(ii) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Allium* plants in tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a “pest free area” (country freedom) free from the organisms listed below:

- **Phytoplasmas:**

Aster yellows phytoplasma, Garlic decline phytoplasma and Onion yellows phytoplasma.

- **Viruses:**

*Garlic dwarf virus, Garlic mite-borne latent virus, Garlic virus X, Onion mite-borne latent virus, Shallot yellow stripe virus, Sint-Jan's onion latent virus, Tobacco rattle virus, and Tomato black ring virus.*

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declaration to the phytosanitary certificate:

**“The *Allium* tissue cultures in this consignment have been sourced from a “Pest free area” (country freedom), free from regulated phytoplasmas (Aster yellows phytoplasma, Garlic decline phytoplasma and Onion yellows phytoplasma) and viruses (*Garlic dwarf virus, Garlic mite-borne latent virus, Garlic virus X, Onion mite-borne latent virus, Shallot yellow stripe virus, Sint-Jan's onion latent virus, Tobacco rattle virus and Tomato black ring virus*).”**

(v) Post-entry quarantine

Post-entry quarantine is not required, provided that the pre-export phytosanitary requirements are completed, and the phytosanitary certificate is endorsed with the required additional declaration (part iv).

(vi) Assessment of Equivalent Phytosanitary Status

Where the pre-export phytosanitary requirements (part iii) can not be met, a request for assessment of equivalent phytosanitary status can be made to MAF.

## Pest List for *Allium*

### REGULATED PESTS (actionable)

#### Insect

#### Insecta

##### Coleoptera

##### Curculionidae

<i>Brachycerus muricatus</i>	weevil
<i>Brachycerus undatus</i>	weevil
<i>Ceutorhynchus jakovlevi</i>	onion weevil

##### Nitidulidae

<i>Carpophilus obsoletus</i>	dried fruit beetle
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##### Diptera

##### Anthomyiidae

<i>Delia antiqua</i>	onion maggot
<i>Delia florilega</i>	onion fly

##### Heleomyzidae

<i>Suillia lurida</i>	garlic fly
<i>Suillia univittata</i>	-

##### Syrphidae

<i>Eumerus amoenus</i>	onion bulb fly
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##### Lepidoptera

##### Cossidae

<i>Dyspepsa ulula</i>	garlic moth
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##### Yponomeutidae

<i>Acrolepia alliella</i>	-
<i>Acrolepia sapporensis</i>	allium leafminer
<i>Acrolepiopsis assectella</i>	leek moth

##### Thysanoptera

##### Thripidae

<i>Thrips tabaci</i> [vector]	onion thrips
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#### Mite

#### Arachnida

##### Acarina

##### Acaridae

<i>Rhizoglyphus setosus</i>	bulb mite
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##### Eriophyidae

<i>Aceria tulipae</i> [vector]	wheat curl mite
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#### Nematode

#### Adenophorea

##### Dorylaimida

##### Longidoridae

<i>Paralongidorus maximus</i>	-
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##### Trichodoridae

<i>Paratrichodorus allius</i>	stubby root nematode
<i>Paratrichodorus minor</i> [vector]	stubby root nematode
<i>Paratrichodorus teres</i>	stubby root nematode

#### Secernentea

##### Tylenchida

##### Aphelenchoididae

<i>Aphelenchoides besseyi</i>	rice white-tip nematode
<i>Aphelenchoides parietinus</i>	-

##### Belonolaimidae

<i>Belonolaimus gracilis</i>	sting nematode
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##### Hoplolaimidae

<i>Helicotylenchus indicus</i>	sprial nematode
<i>Helicotylenchus microlobus</i>	spiral nematode

<i>Helicotylenchus multicinctus</i>	spiral nematode
<i>Hoplolaimus seinhorsti</i>	lance nematode
<i>Rotylenchulus reniformis</i>	reniform nematode
<b>Meloidogynidae</b>	
<i>Meloidogyne arenaria</i>	peanut root knot nematode
<i>Meloidogyne chitwoodi</i>	root knot nematode
<b>Tylenchidae</b>	
<i>Ditylenchus dipsaci</i> [strains not in New Zealand]	stem and bulb nematode
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Dothideales</b>	
<b>Mycosphaerellaceae</b>	
<i>Mycosphaerella allii-cepae</i> (anamorph <i>Cladosporium allii-cepae</i> )	leaf blotch
<b>Basidiomycota: Basidiomycetes</b>	
<b>Agaricales</b>	
<b>Tricholomataceae</b>	
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	armillaria root rot
<b>Basidiomycota: Teliomycetes</b>	
<b>Uredinales</b>	
<b>Melampsoraceae</b>	
<i>Melampsora allii-fragilis</i>	rust
<b>Pucciniaceae</b>	
<i>Puccinia asparagi</i>	asparagus rust
<b>Basidiomycota: Ustomycetes</b>	
<b>Ustilaginales</b>	
<b>Tilletiaceae</b>	
<i>Urocystis colchici</i>	leaf smut
<b>Oomycota</b>	
<b>Pythiales</b>	
<b>Pythiaceae</b>	
<i>Phytophthora palmivora</i>	black rot
<b>mitosporic fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Phyllosticta allii</i>	leaf blight
<i>Septoria viridi-tingens</i>	--
<b>Bacterium</b>	
<b>Enterobacteriaceae</b>	
<i>Erwinia chrysanthemi</i> pv. <i>chrysanthemi</i>	bacterial soft rot
<b>Pseudomonadaceae</b>	
<i>Burkholderia cepacia</i>	sour skin
<i>Pseudomonas xanthochlora</i>	-
<b>Virus</b>	
<i>Garlic dwarf virus</i>	-
<i>Garlic mite-borne latent virus</i>	-
<i>Garlic virus X</i>	-
<i>Onion mite-borne latent virus</i>	-
<i>Shallot yellow stripe virus</i>	-
<i>Sint-Jan's onion latent virus</i>	-
<i>Tobacco rattle virus</i> [strains not in New Zealand]	-
<i>Tomato black ring virus</i>	-
<b>Phytoplasma</b>	
Aster yellows phytoplasma	-
Garlic decline phytoplasma	-
Onion yellows phytoplasma	-



## *Alstroemeria*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Alstroemeria*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom, USA.

**Quarantine Pests:** *Frankliniella occidentalis*, *Liriomyza* spp.

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

"The plants have been inspected in accordance with appropriate official procedures and found to be free of *Frankliniella occidentalis* and *Liriomyza* spp."

#### **B. For Dormant Bulbs:**

##### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

#### **Additional Declaration(s):**

##### **1) For bulbs produced under a MAF-approved Dutch bulb propagation scheme:**

"In addition to inspection of the dormant bulbs prior to shipment, the imported bulbs meet the requirements of the NAKtuinbouw Elite (Class SEE or EE) or Select (Class A or E) [choose one] bulb certification scheme."

**OR**

##### **2) For bulbs NOT produced under a MAF-approved bulb propagation scheme:**

"In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests."

##### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

#### **C. For Tissue Cultures:**

As for Standard Entry Conditions for Tissue Cultures - see Section 2.2.2.

## *Andromeda*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Andromeda*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Chrysomyxa ledi*, *Microsphaeria* spp.

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. **Additional Declarations:** "*Chrysomyxa ledi* and *Microsphaeria* spp. are not known to occur in \_\_\_\_\_ (the country or state of where the plants were grown) \_\_\_\_\_".

**OR**

"The plants were inspected during the growing season and no *Chrysomyxa ledi* or *Microsphaeria* spp. was detected".

- b. "The plants have been dipped prior to export in propiconazole at the rate of 0.5g a.i. per litre of water."

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Anemone*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Anemone*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom, USA.

**Quarantine Pests:** Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

"Rust diseases of genus *Coleosporium* and *Cronatium* are not known to occur on \_\_\_\_\_(the host species being imported)\_\_\_\_\_ in \_\_\_\_\_ (the country in which the plants were grown) \_\_\_\_\_".

#### **B. For Dormant Bulbs:**

##### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

#### **Additional Declaration(s):**

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

##### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

#### **C. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Anthurium*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Anthurium*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Anubias*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Snails, snail eggs, worms, and leeches

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2  
**Minimum Period:** 3 months

**Additional Declaration:**

"The plants were inspected immediately prior to export and no snails, snail eggs, worms or leeches were detected in a 600 unit sample".

**Special Conditions:**

i) each aquarium must be clear sided and clearly labelled as follows:

**QUARANTINE AQUARIUM**

MAF Registration Number:

Name of Quarantine Operator:

- ii) the aquarium must be placed in a watertight tray, the bottom of which must contain a dilute solution of copper sulphate (5 parts per million or a small grain of a copper sulphate crystal in a litre of water);
- iii) must be inside a building which can be secured;
- iv) must be at least 5m away from a non-quarantine aquarium.

**B. For Tissue Cultures:**

As for Standard Entry Conditions for Tissue Cultures - see Section 2.2.2

## *Arbutus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Arbutus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Phytophthora ramorum*

#### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

#### **B. For Plants in Tissue Culture from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Aronia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Gymnosporangium clavipes*, *Gymnosporangium globosum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**For Whole Plants and Tissue Culture:**

**Option 1**

**PEQ:** Level 2  
**Minimum Period:** 6 months

**Additional Declarations:**

1. "*Gymnosporangium clavipes* and *Gymnosporangium globosum* are not known to occur on \_\_\_\_\_(host species being imported) \_\_\_\_\_ in \_\_\_\_\_ (the country or state in which the plants were grown) \_\_\_\_\_".
2. "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water, prior to export".

**OPTION 2:**

**PEQ:** Level 3  
**Minimum Period:** 3 months

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Arum*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Virus diseases

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**No import permit is required.**

**PEQ:** None

**Additional Declaration(s):**

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

**OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

## *Asparagus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Asparagus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Puccinia asparagi*; virus diseases

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

### **For Whole Plants and Tissue Culture:**

**PEQ:** Level 3

**Minimum Period:** 3 months

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Aster*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** Aster yellows phytoplasma, Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Additional Declarations:**

"Aster yellows phytoplasma is not known to occur in \_\_\_\_ (the country or state where the plants were grown) \_\_\_\_".

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested or inspected and found free of Aster yellows phytoplasma".

## *Beaucarnea*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Beaucarnea*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Begonia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Begonia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Virus diseases

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

#### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

#### **Additional Declaration(s):**

##### **1) For bulbs produced under a MAF-approved Dutch bulb propagation scheme:**

"In addition to inspection of the dormant bulbs prior to shipment, the imported bulbs meet the requirements of the BKD Class 1 or ALG [choose one] bulb certification scheme."

**OR**

##### **2) For bulbs NOT produced under a MAF-approved bulb propagation scheme:**

"In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests."

#### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

## *Berberis*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Berberis*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Uredinales; *Phytophthora ramorum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**For Whole Plants (dormant) or Cuttings (dormant):**

**PEQ:** Level 2

**Minimum Period:** 3 months

a. Conditions for *Phytophthora ramorum* (see Section 2.2.1.10)

### **Additional Declarations:**

1. "The plants were inspected during the previous growing season and no rust diseases were detected".
2. "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water".

## *Bidens*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Bidens*”.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Xylella fastidiosa*

#### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

##### **A. For Cuttings and Whole Plants**

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.11)
- b. Additional declaration: “The plants have been dipped in Furalaxyl at the rate of 0.25g a.i. per litre of water.”

##### **B. For Plants in Tissue Culture from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## ***Bowenia***

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Bowenia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All except Australia and Italy

**Quarantine Pests:** *Demysus meleoides*

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

**A. For Cuttings (dormant), including offsets in the form of dormant buds divided from the trunk:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**Inspection Requirements:** A minimum of 600 plants are to be inspected during each inspection in post-entry quarantine

**B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Caladium*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Caladium*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Caladium virus X

**Entry Conditions:** Basic; with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

#### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

#### **Additional Declaration(s):**

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

#### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

#### **OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

#### **Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock free of Caladium virus X."

## *Calanthe*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Calanthe*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Uredinales, *Tetranychus kanzawai*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 1 year

#### **Additional Declarations:**

1. "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water, prior to export".
2. "The plants have been dipped prior to export in dicofol at the rate of 0.7g a.i. per litre of water".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Camellia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Camellia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Phytophthora ramorum*; *Tetranychus kanzawai*

### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)
- b. Additional declaration: "The plants have been dipped in prochloraz at the rate of 0.5g a.i. per litre of water".
- c. All visible flower buds are to be removed prior to export.

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Camellia sinensis*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Camellia sinensis*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

<b>Approved Countries:</b>	Afghanistan	Iran	Mongolia	Syria
	Armenia	Iraq	Myanmar	Taiwan
	Azerbaijan	Israel	Nepal	Tajikistan
	Bangladesh	Japan	North Korea	Thailand
	Bhutan	Jordan	Oman	Turkey
	Brunei	Kazakstan	Pakistan	Turkmenistan
	Cambodia	Kuwait	Philippines	United Arab Emirates
	China	Kyrgyzstan	Saudi Arabia	Uzbekistan
	Georgia	Laos	Singapore	Vietnam
	India	Lebanon	South Korea	Yemen
	Indonesia	Malaysia	Sri Lanka	

**Quarantine Pests:** *Exobasidium vexans*; Phloem necrosis; *Phytophthora ramorum*; *Tetranychus kanzawai*.

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

### **For Whole Plants and Tissue Culture:**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Canna*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Virus diseases; *Xylella fastidiosa*

**Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 6 months

- a. Conditions for *Xylella fastidiosa* (see section 2.2.1.11)

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom:**

**OPTION 1:**

**No import permit is required.**

**PEQ:** None

- a. Conditions for *Xylella fastidiosa* (see section 2.2.1.11), AND
- b. Additional declaration “In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

**OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than in B**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

- a. Conditions for *Xylella fastidiosa* (see section 2.2.1.11), AND

- b. Additional declaration: The dormant bulbs in this consignment have been “derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.”, AND
- c. treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Carica*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Papaya mosaic virus, Papaya ringspot virus

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**OPTION 1:**

**A. For Whole Plants:**

**PEQ:** Level 2  
**Minimum Period:** 3 months

**Additional Declaration:**

"Papaya mosaic virus and Papaya ringspot virus are not known to occur in \_\_\_\_\_(the country or state where the plants were grown) \_\_\_\_\_".

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent material tested and found free of Papaya ringspot virus and Papaya ringspot virus."

**OPTION 2:**

**For Whole Plants and Tissue Cultures:**

**PEQ:** Level 3  
**Minimum Period:** 3 months

## *Carpinus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Carpinus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Phytophthora ramorum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**For Whole Plants (dormant) or Cuttings (dormant):**

**PEQ:** Level 2

**Minimum Period:** 3 months

a. Conditions for *Phytophthora ramorum* (see Section 2.2.1.10)

### **Additional Declaration:**

"The plants have been dipped in a combination of \_\_\_\_\_ (insert one of the options below) \_\_\_\_\_, at the rate of 1g a.i. per litre of water, and thiram, at the rate of 1.5g a.i. per litre of water".

**Note:** One of the following fungicides is to be used:

Benomyl  
Carbendazim  
Thiophanate methyl

## *Carya*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Carya*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, USA

**Quarantine Pests:** *Fusicladium effusum*, Pecan bunch

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**PEQ:** Level 2

**Minimum Period:** 6 months

### **Additional Declaration:**

"*Fusicladium effusum* and Pecan bunch are not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

## *Carya ovata*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Carya ovata*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Cryphonectria parasitica*;

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Cuttings (dormant) and Whole Plants (dormant) from All Countries:**

##### **OPTION 1:**

**PEQ:** Level 2

**Minimum Period:** 3 months

##### **Additional Declaration(s):**

"*Cryphonectria parasitica* is not known to occur in \_\_\_\_\_ (the country or state where the plants/cuttings were produced) \_\_\_\_\_".

##### **OPTION 2:**

**PEQ:** Level 3

**Minimum Period:** 6 months

#### **B. For Tissue Cultures from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

## *Castanea*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Castanea*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Conotrachelus carinifer*, *Curculio* spp., *Ceratocystis fagacearum*, *Cryphonectria parasitica*, *Dryocosmus kuriphilus*, *Phytophthora ramorum*, *Xylella fastidiosa*

### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants (dormant) and Cuttings (dormant) and Tissue Culture:**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.11)
- c. Conditions for *Cryphonectria parasitica* and *Ceratocystis fagacearum*:

Additional declaration: "*Cryphonectria parasitica* and *Ceratocystis fagacearum* are not known to occur in \_\_\_\_\_(the country/ state where the plants were grown)",

**OR**

"The plants were inspected (or the wood was taken from a tree that was inspected) during the previous growing season and no *Cryphonectria parasitica* or *Ceratocystis fagacearum* was detected."

## *Cedrus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Cedrus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Bursaphelenchus* spp.; *Lophodermium* spp.; Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 6 months

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

## *Chrysanthemum morifolium*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Chrysanthemum morifolium*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Frankliniella occidentalis*, *Liriomyza* spp., virus diseases

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

"The plants have been inspected in accordance with appropriate official procedures and found to be free of *Frankliniella occidentalis* and *Liriomyza* spp."

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

#### **PLUS:**

#### **Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus or virus like diseases."

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Citrus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Citrus* nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

**2. Pests of *Citrus***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Citrus* cuttings from offshore MAF-accredited facilities (quarantine stations)**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Citrus*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Citrus*.

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Citrus* cuttings exported to New Zealand.

(ii) Inspection, Testing and Treatments of the consignment

The inspection, testing and treatment requirements for specified regulated pests must be undertaken at the accredited facility as specified in the agreement between MAF and the accredited facility operator. Refer to *Citrus* Inspection, Testing and Treatment Requirements following the *Citrus* pest list.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Citrus* cuttings have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

AND

- sourced from either mother plants that have been kept in insect proof plant houses or from open ground mother plants

AND

- held and tested for/classified free from specified regulated pests at a MAF-accredited facility

AND

- held in a manner to ensure that infestation/reinfestation does not occur, following testing (and certification) at the accredited facility.

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country

NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:

"The *Citrus* cuttings in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with New Zealand's current phytosanitary requirements.

AND

- sourced from mother plants that have been kept in insect proof plant houses/sourced from open ground mother plants [choose one].

AND

- held and tested for/classified free from specified regulated pests at the accredited facility as required in the agreement between MAF and the accredited facility operator.

AND

- held in a manner to ensure infestation/reinfestation does not occur following testing (and certification), at the accredited facility."

(v) Post-entry quarantine

**PEQ:** Level 2

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pathogens. Indicative minimum quarantine periods are: 6 months for *Citrus* cuttings sourced from mother plants that have been kept in insect proof plant houses, or 16 months for *Citrus* cuttings sourced directly from open ground mother plants. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.2 *Citrus* cuttings from non-accredited facilities in any country

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Citrus* cuttings exported to New Zealand.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Citrus* cuttings have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

(iii) Additional declarations to the phytosanitary certificate

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

"The *Citrus* cuttings in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with the current phytosanitary requirements of MAF."

(iv) Inspection, Testing and Treatments of the consignment

Following inspection at the border, upon arrival, the *Citrus* cuttings will be directed to a facility accredited to the MAF standard BMG-STD-TREAT: *Approval of Suppliers Providing Treatment of Imported Risk Goods and Forestry/Plant Related Material for Export*, to be sprayed/dipped in MAF-approved miticide and insecticides as described in section 2.2.1.6 of the basic conditions.

Following treatment, testing for specified regulated pests must be undertaken at a New Zealand Level 3 MAF-accredited facility. Refer to *Citrus* Inspection, Testing and Treatment Requirements following the *Citrus* pest list.

(v) Post-entry quarantine

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pathogens. 16 months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.3 *Citrus* plants in tissue culture from offshore MAF-accredited facilities

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Citrus*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Citrus*.

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Citrus* tissue culture exported to New Zealand.

(ii) Pest proof container and growing media for tissue culture

Cultures imported in a growing media must have been grown in the vessel in which they are imported. The container must be rigid, and either clear plastic or clear glass. The tissue culture media must not contain charcoal.

(iii) Inspection, Testing and Treatments of the consignment

The inspection, treatment and testing requirements for specified pests must be undertaken at the accredited facility as specified in the arrangement between MAF and the accredited facility operator. Refer to *Citrus* Inspection, Testing and Treatment Requirements following the *Citrus* pest list.

(iv) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Citrus* tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

AND

- held and tested for/classified free from specified regulated pests at a MAF-

accredited facility

AND

- held in a manner to ensure that infestation/reinfestation does not occur, following testing (and certification) at the accredited facility.

(v) Additional declarations to the phytosanitary certificate

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

"The *Citrus* tissue culture in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with New Zealand's current phytosanitary requirements.

AND

- held and tested for/classified free from specified regulated pests at the accredited facility as specified in the agreement between MAF and the accredited facility operator.

AND

- held in a manner to ensure infestation/reinfestation does not occur following testing (and certification), at the accredited facility."

(vi) Post-entry quarantine

**PEQ:** Level 2

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pests. Six months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.4 *Citrus* plants in tissue culture from non-accredited facilities in any country

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Citrus* nursery stock exported to New Zealand.

(ii) Pest proof container and growing media for tissue culture

Cultures imported in a growing media must have been grown in the vessel in which they are imported. The container must be rigid, and either clear plastic or clear glass. The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Citrus* tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

(iv) Additional declarations to the phytosanitary certificate

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

"The *Citrus* tissue culture in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with the current phytosanitary requirements of MAF."

(v) Inspection, Testing and Treatments of the consignment

Upon arrival, the inspection, treatment and testing requirements for specified pests must be undertaken at a New Zealand Level 3 MAF-accredited facility. Refer to *Citrus* Inspection, Testing and Treatment Requirements following the *Citrus* pest list.

(vi) Post-entry quarantine

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pests. 16 months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected or treatments/testing are required.

## Pest List for *Citrus*

### REGULATED PESTS (actionable)

#### Insect

#### Insecta

##### Coleoptera

##### Bostrichidae

*Apate indistincta*

shot-hole borer

*Apate terebrans*

shot-hole borer

##### Buprestidae

*Agrilus alesii*

flatheaded citrus borer

*Agrilus auriventris*

citrus flatheaded borer

##### Cerambycidae

*Anoplophora malasiaca*

white-spotted longicorn beetle

*Chelidonium gibbicolle*

-

*Dihammus vastator*

fig longhorn

*Melanauster chinensis*

-

*Paradisterna plumifera*

speckled longicorn

*Promeces linearis*

-

*Skeletodes tetrops*

longhorn beetle

*Strongylurus thoracicus*

pittosporum longicorn

*Uracanthus cryptophagus*

citrus branch borer

##### Chrysomelidae

*Colasposoma fulgidum*

bluegreen citrus nibbler

*Colasposoma scutellare*

-

*Geloptera porosa*

pitted apple beetle

*Luperomorpha funesta*

mulberry flea beetle

*Monolepta australis*

red-shouldered leaf beetle

*Sebaethe fulvipennis*

flea beetle

##### Coccinellidae

*Cheilomenes lunata* [Animals Biosecurity]

-

*Chilocorus cacti* [Animals Biosecurity]

-

*Chilocorus distigma* [Animals Biosecurity]

-

*Chilocorus nigrata* [Animals Biosecurity]

-

*Exochomus flavipes* [Animals Biosecurity]

-

*Pentilia castanea* [Animals Biosecurity]

-

*Rhyzobius lophanthae* [Animals Biosecurity]

-

*Scymnus nanus* [Animals Biosecurity]

-

*Serangium parcesetosum* [Animals Biosecurity]

-

*Stethorus aethiops* [Animals Biosecurity]

-

*Stethorus histrio* [Animals Biosecurity]

-

*Stethorus punctata picipes* [Animals Biosecurity]

-

##### Curculionidae

*Amystax fasciatus* [Animals Biosecurity]

-

*Artipus* sp.

-

*Brachycerus citriperda*

-

*Callirhopalus bifasciatus*

two-banded Japanese weevil

*Dereodus recticollis*

-

*Diaprepes abbreviatus*

citrus weevil

*Diaprepes* spp.

-

*Eutinophaea bicristata*

citrus leaf-eating weevil

*Leptopius squalidus*

fruit tree root weevil

*Naupactus xanthographus*

fruit tree weevil

*Otiorrhynchus cribricollis*

cribrate weevil

*Pachnaeus citri*

-

*Pachnaeus litus*

citrus root weevil

*Perperus lateralis*

white-striped weevil

<i>Prepodes</i> spp.	-
<i>Protostrongylus avidus</i>	weevil
<i>Sciobius marshalli</i>	citrus snout beetle
<i>Sympiezomias lewisi</i>	-
<b>Lucanidae</b>	
<i>Prosopocoilus spencei</i>	-
<b>Scarabaeidae</b>	
<i>Hypopholis indistincta</i>	scarab beetle
<i>Maladera matrida</i>	scarab beetle
<b>Scolytidae</b>	
<i>Salagena</i> sp.	-
<i>Xylosandrus germanus</i>	alnus ambrosia beetle
<b>Diptera</b>	
<b>Cecidomyiidae</b>	
<i>Contarinia citri</i>	leafcurling midge
<i>Contarinia okadai</i>	citrus flower gall midge
<i>Trisopsis</i> sp.	-
<b>Chamaemyiidae</b>	
<i>Leucopis alticeps</i> [Animals Biosecurity]	-
<b>Drosophilidae</b>	
<i>Drosophila paulistorum</i>	-
<i>Drosophila pseudoobscura</i>	-
<i>Drosophila simulans</i>	-
<i>Drosophila willistoni</i>	-
<b>Tephritidae</b>	
<i>Dirioxa pornia</i>	island fruit fly
<b>Hemiptera</b>	
<b>Anthocoridae</b>	
<i>Orius thripoborus</i> [Animals Biosecurity]	-
<i>Thripheps thripoborus</i> [Animals Biosecurity]	-
<b>Coreidae</b>	
<i>Acanthocoris striicornis</i>	larger squash bug
<i>Anoplocnemis curvipes</i>	coreid bug
<i>Leptoglossus membranaceus</i>	coreid bug
<i>Mictis profana</i>	crusader bug
<i>Paradasynus spinosus</i>	squash bug
<i>Veneza phyllopus</i>	leaf-footed bug
<b>Lygaeidae</b>	
<i>Nysius vinitor</i>	Rutherglen bug
<b>Miridae</b>	
<i>Austropeplus</i> sp.	citrus blossom bug
<b>Pentatomidae</b>	
<i>Antestia variegata</i>	antestia bug
<i>Antestiopsis orbitalis</i>	-
<i>Antestiopsis variegata</i>	antestia bug
<i>Biprorulus bibax</i>	spined citrus bug
<i>Glaucias subpunctatus</i>	polished green stink bug
<i>Halyomorpha mista</i>	brown-marmorated stink bug
<i>Musgraveia sulciventris</i>	bronze orange bug
<i>Plautia stali</i>	oriental stink bug
<i>Rhynchocoris humeralis</i>	pentatomid bug
<b>Unknown Hemiptera</b>	
<i>Holopterna vulga</i>	bug
<b>Homoptera</b>	
<b>Aleyrodidae</b>	
<i>Aleurocanthus citriperdus</i>	whitefly
<i>Aleurocanthus spiniferus</i>	orange spiny whitefly
<i>Aleurocanthus</i> spp.	whiteflies
<i>Aleurocanthus woglumi</i>	citrus blackfly

<i>Aleurodicus dispersus</i>	spiralling whitefly
<i>Aleurolobus marlatti</i>	Marlatt whitefly
<i>Aleuroplatus</i> sp.	whitefly
<i>Aleurothrixus floccosus</i>	woolly whitefly
<i>Aleurotuba jelinekii</i>	-
<i>Aleurotuberculatus aucubae</i>	aucuba whitefly
<i>Bemisia citricola</i>	-
<i>Dialeurodes citri</i>	citrus whitefly
<i>Dialeurodes citrifolii</i>	cloudywinged whitefly
<i>Dialeurolonga</i> sp.	-
<i>Parabemisia myricae</i>	Japanese bayberry whitefly
<i>Siphoninus phillyreae</i>	phillyrea whitefly
<b>Aphididae</b>	
<i>Aphis fabae</i>	bean aphid
<i>Aulacorthum magnoliae</i>	Japanese elder aphid
<b>Cicadellidae</b>	
<i>Asymmetrasca decedens</i>	leafhopper
<i>Circulifer opacipennis</i>	-
<i>Circulifer tenellus</i>	beet leafhopper
<i>Cuerna costalis</i>	leafhopper
<i>Edwardsiana flavescens</i>	leafhopper
<i>Empoasca bodenheimeri</i>	-
<i>Empoasca citrusa</i>	green citrus leafhopper
<i>Empoasca decipiens</i>	green leafhopper
<i>Empoasca distinguenda</i>	-
<i>Empoasca fabae</i>	potato leafhopper
<i>Empoasca onukii</i>	tea green leafhopper
<i>Homalodisca coagulata</i>	glassy-winged sharpshooter
<i>Homalodisca lacerta</i>	-
<i>Jacobiasca lybica</i>	cotton jassid
<i>Neocaliturus haematoceps</i>	leafhopper
<i>Penthimiola bella</i>	citrus leafhopper
<i>Scaphytopius nitridus</i>	leafhopper
<b>Cicadidae</b>	
<i>Cryptotympana facialis</i>	black cicada
<i>Meimuna opalifera</i>	elongate cicada
<b>Coccidae</b>	
<i>Ceroplastes floridensis</i>	Florida wax scale
<i>Ceroplastes japonicus</i>	pink wax scale
<i>Ceroplastes rubens</i>	red wax scale
<i>Ceroplastes rusci</i>	fig wax scale
<i>Coccus celatus</i>	-
<i>Coccus pseudomagnoliarum</i>	citricola scale
<i>Coccus viridis</i>	green scale
<i>Cribrolecanium andersoni</i>	white powdery scale
<i>Gascardia brevicauda</i>	white waxy scale
<i>Protopulvinaria pyriformis</i>	pyriform scale
<i>Pulvinaria aethiopica</i>	soft green scale
<i>Pulvinaria aurantii</i>	citrus cottony scale
<i>Pulvinaria cellulosa</i>	pulvinaria scale
<i>Saissetia citricola</i>	citrus string cottony scale
<i>Saissetia somereni</i>	-
<b>Dactylopiidae</b>	
<i>Dactylopius filamentosis</i>	-
<i>Dactylopius vastator</i>	-
<b>Diaspididae</b>	
<i>Aonidiella citrina</i>	yellow scale
<i>Chrysomphalus aonidium</i>	Florida red scale
<i>Chrysomphalus bifasciculatus</i>	brown scale

<i>Chrysomphalus dictyospermi</i>	dictyospermum scale
<i>Chrysomphalus pinnulifera</i>	false purple scale
<i>Ischnaspis longirostris</i>	black thread scale
<i>Lepidosaphes beckii</i>	purple scale
<i>Lepidosaphes gloverii</i>	Glover scale
<i>Parlatoria ziziphi</i>	black parlatoria scale
<i>Pseudaonidia duplex</i>	camphor scale
<i>Selenaspidus articulatus</i>	West Indian red scale
<i>Unaspis citri</i>	citrus snow scale
<i>Unaspis yanonensis</i>	Japanese citrus scale
<b>Flatidae</b>	
<i>Colgar peracuta</i>	-
<i>Geisha distinctissima</i>	green broad-winged planthopper
<i>Lawana conspersa</i>	green flatid planthopper
<i>Metcalfa pruinosa</i>	planthopper
<b>Fulgoridae</b>	
<i>Anzora unicolor</i>	-
<b>Margarodidae</b>	
<i>Drosicha howardi</i>	persimmon mealybug
<i>Icerya seychellarum</i>	Seychelles scale
<b>Ortheziidae</b>	
<i>Nipponorthezia ardisiae</i>	ensign scale
<b>Pseudococcidae</b>	
<i>Allococcus</i> spp.	-
<i>Ferrisia consobrina</i>	mealybug
<i>Ferrisia virgata</i>	striped mealybug
<i>Nipaecoccus vastator</i>	nipa mealybug
<i>Nipaecoccus viridis</i>	hibiscus mealybug
<i>Paracoccus burnerae</i>	spherical mealybug
<i>Planococcus kraunhiae</i>	Japanese wisteria mealybug
<i>Planococcus lilacinus</i>	citrus mealybug
<i>Planococcus minor</i>	passionvine mealybug
<i>Pseudococcus citriculus</i>	smaller citrus mealybug
<i>Pseudococcus commonus</i>	-
<i>Pseudococcus filamentosus</i>	mealybug
<i>Rastrococcus spinosus</i>	mealybug
<i>Rhizoecus kondonis</i>	Kondo mealybug
<b>Psyllidae</b>	
<i>Diaphorina citri</i>	citrus psyllid
<i>Trioza erytreae</i> [vector]	citrus psyllid
<b>Ricaniidae</b>	
<i>Scolypopa</i> sp.	-
<b>Tropiduchidae</b>	
<i>Tambinia</i> sp.	-
<b>Hymenoptera</b>	
<b>Aphelinidae</b>	
<i>Aphytis africanus</i> [Animals Biosecurity]	-
<i>Aphytis holoxanthus</i> [Animals Biosecurity]	-
<i>Aphytis lepidosaphes</i> [Animals Biosecurity]	-
<i>Aphytis lingnanensis</i> [Animals Biosecurity]	-
<i>Aphytis melinus</i> [Animals Biosecurity]	-
<i>Azotus platensis</i> [Animals Biosecurity]	-
<i>Cales noacki</i> [Animals Biosecurity]	-
<i>Cales orchamoplati</i> [Animals Biosecurity]	-
<i>Centrodora penthymiae</i> [Animals Biosecurity]	-
<i>Coccophagus caridei</i> [Animals Biosecurity]	-
<i>Coccophagus pulvinariae</i> [Animals Biosecurity]	-
<i>Encarsia ectophaga</i> [Animals Biosecurity]	-
<i>Encarsia lahorensis</i> [Animals Biosecurity]	-

<i>Encarsia lounsburyi</i> [Animals Biosecurity]	-
<i>Encarsia opulenta</i> [Animals Biosecurity]	-
<i>Encarsia smithi</i> [Animals Biosecurity]	-
<i>Eretmocerus serius</i> [Animals Biosecurity]	-
<i>Marietta connecta</i> [Animals Biosecurity]	-
<i>Marietta leopardina</i> [Animals Biosecurity]	-
<b>Braconidae</b>	
<i>Apanteles aristotalilae</i> [Animals Biosecurity]	-
<i>Biosteres longicaudatus</i> [Animals Biosecurity]	-
<i>Pholetesor ornigis</i> [Animals Biosecurity]	-
<b>Encyrtidae</b>	
<i>Anicetus beneficus</i> [Animals Biosecurity]	-
<i>Comperiella bifasciata</i> [Animals Biosecurity]	-
<i>Habrolepis rouxi</i> [Animals Biosecurity]	-
<i>Leptomastix dactylopii</i> [Animals Biosecurity]	parasitic wasp
<i>Metaphycus helvolus</i> [Animals Biosecurity]	-
<i>Metaphycus luteolus</i> [Animals Biosecurity]	-
<i>Metaphycus stanleyi</i> [Animals Biosecurity]	-
<i>Metaphycus varius</i> [Animals Biosecurity]	-
<i>Psyllaephagus pulvinatus</i> [Animals Biosecurity]	-
<b>Eulophidae</b>	
<i>Aprostocetus ceroplastae</i> [Animals Biosecurity]	-
<i>Elachertus fenestratus</i> [Animals Biosecurity]	-
<i>Tamarixia radiatus</i> [Animals Biosecurity]	-
<b>Eupelmidae</b>	
<i>Anastatus biproruli</i> [Animals Biosecurity]	-
<b>Eurytomidae</b>	
<i>Bruchophagus fellis</i>	citrus gall midge
<b>Formicidae</b>	
<i>Acromyrmex octospinosus</i>	leaf-cutting ant
<i>Anoplolepis braunsi</i> [Animals Biosecurity]	-
<i>Anoplolepis custodiens</i>	ant
<i>Anoplolepis steingroeveri</i> [Animals Biosecurity]	black ant
<i>Atta cephalotes</i>	leaf-cutting ant
<i>Atta sexdens</i>	-
<i>Atta texana</i>	Texas leaf-cutting ant
<i>Camponotus rufoglaucus</i>	-
<i>Crematogaster castanea</i>	-
<i>Crematogaster liengmei</i>	-
<i>Crematogaster peringueyi</i> [Animals Biosecurity]	cocktail ant
<i>Lepisiota capensis</i> [Animals Biosecurity]	-
<i>Myrmecaria natalensis</i>	-
<i>Pheidole tenuinodis</i>	ant
<i>Polyrhachis schistaceus</i>	ant
<i>Solenopsis invicta</i> [Animals Biosecurity]	red imported fire ant
<i>Tapinoma arnoldi</i>	-
<i>Technomyrmex albipes foreli</i> [Animals Biosecurity]	-
<b>Mymaridae</b>	
<i>Chaetomyrmex gracile</i> [Animals Biosecurity]	-
<i>Chaetomyrmex lepidum</i> [Animals Biosecurity]	-
<i>Gonatocerus incomptus</i> [Animals Biosecurity]	-
<b>Platygasteridae</b>	
<i>Amitus hesperidum</i> [Animals Biosecurity]	-
<i>Amitus spiniferus</i> [Animals Biosecurity]	-
<i>Fidiobia citri</i> [Animals Biosecurity]	-
<b>Scelionidae</b>	
<i>Trissolcus oeneus</i> [Animals Biosecurity]	-
<i>Trissolcus oenone</i> [Animals Biosecurity]	-
<i>Trissolcus ogyges</i> [Animals Biosecurity]	-

<b>Signiphoridae</b>	
<i>Signiphora fax</i> [Animals Biosecurity]	-
<i>Signiphora flavella</i> [Animals Biosecurity]	-
<i>Signiphora perpauca</i> [Animals Biosecurity]	-
<b>Trichogrammatidae</b>	
<i>Trichogramma platneri</i> [Animals Biosecurity]	-
<b>Vespidae</b>	
<i>Polistes</i> spp. [Animals Biosecurity]	paper wasps
<b>Isoptera</b>	
<b>Termitidae</b>	
<i>Odontotermes lokanandi</i>	termite
<b>Lepidoptera</b>	
<b>Arctiidae</b>	
<i>Lemyra imparilis</i>	mulberry tiger moth
<b>Blastobasidae</b>	
<i>Holcocera iceryaeella</i>	-
<b>Cosmopterigidae</b>	
<i>Pyroderces rileyi</i>	pink scavenger caterpillar
<b>Geometridae</b>	
<i>Anacamptodes fragilaria</i>	koa haole looper
<i>Ascotis selenaria reciprocaria</i>	citrus looper
<i>Gymnoscelis rufifasciata</i>	geometrid moth
<i>Hyposidra talaca</i>	-
<b>Gracillariidae</b>	
<i>Phyllocnistis citrella</i>	citrus leafminer
<b>Hepialidae</b>	
<i>Endoclita excrescens</i>	Japanese swift moth
<i>Endoclita sinensis</i>	-
<b>Lycaenidae</b>	
<i>Virachola isocrates</i>	pomegranate butterfly
<b>Lymantriidae</b>	
<i>Orgyia vetusta</i>	western tussock moth
<b>Metarbelidae</b>	
<i>Indarbela tetraonis</i>	stem borer
<b>Noctuidae</b>	
<i>Arcte coerulea</i>	fruit-piercing moth
<i>Eudocima fullonia</i>	fruit-piercing moth
<i>Helicoverpa assulta</i>	cape gooseberry budworm
<i>Helicoverpa punctigera</i>	oriental tobacco budworm
<i>Tiracola plagiata</i>	banana fruit caterpillar
<i>Xylomyges curialis</i>	noctuid moth
<b>Nymphalidae</b>	
<i>Charaxes jasius</i>	nymphalid butterfly
<b>Oecophoridae</b>	
<i>Psorosticha melanocrepida</i>	citrus leafroller
<i>Psorosticha zizyphi</i>	citrus leafroller
<i>Stathmopoda auriferella</i>	apple heliodinid
<b>Papilionidae</b>	
<i>Papilio aegeus aegeus</i>	-
<i>Papilio anactus</i>	small citrus butterfly
<i>Papilio cresphontes</i>	orange dog
<i>Papilio dardanus cenea</i>	-
<i>Papilio demodocus</i>	orange dog
<i>Papilio demoleus demoleus</i>	-
<i>Papilio helenus nicconicolens</i>	-
<i>Papilio machaon asiatica</i>	-
<i>Papilio memnon</i>	citrus swallowtail
<i>Papilio memnon thunbergii</i>	-
<i>Papilio nireus lyaeus</i>	-

<i>Papilio polytes polytes</i>	-
<i>Papilio protenor demetrius</i>	-
<i>Papilio xuthus</i>	citrus swallowtail
<i>Papilio zelicaon</i>	anise swallowtail
<b>Psychidae</b>	
<i>Eumeta hardenbergi</i>	-
<i>Eumeta japonica</i>	-
<i>Eumeta minuscula</i>	tea bagworm
<i>Eumeta moddermanni</i>	-
<i>Hyalarcta huebneri</i>	leaf case moth
<b>Pyralidae</b>	
<i>Apomyelois ceratoniae</i>	date pyralid
<b>Tortricidae</b>	
<i>Adoxophyes</i> sp.	-
<i>Amorbia cuneana</i>	leafroller
<i>Archips argyrospilus</i>	fruit tree leafroller
<i>Archips machlopiis</i>	leafroller
<i>Archips occidentalis</i>	leafroller
<i>Archips rosanus</i>	rose leafroller
<i>Argyrotaenia citrana</i>	orange tortrix
<i>Cacoecimorpha pronubana</i>	carnation leafroller
<i>Cryptophlebia batrachopa</i>	-
<i>Cryptophlebia leucotreta</i>	false codling moth
<i>Homona magnanima</i>	oriental tea tortrix
<i>Isotenes miserana</i>	orange fruitborer
<i>Platynota stultana</i>	omnivorous leafroller
<i>Tortrix capensana</i>	tortricid moth
<b>Yponomeutidae</b>	
<i>Prays citri</i>	citrus flower moth
<i>Prays parilis</i>	citrus flower moth
<b>Neuroptera</b>	
<b>Chrysopidae</b>	
<i>Chrysopa oculata</i> [Animals Biosecurity]	-
<b>Coniopterygidae</b>	
<i>Coniopteryx vicina</i> [Animals Biosecurity]	-
<i>Conwentzia barretti</i> [Animals Biosecurity]	-
<b>Orthoptera</b>	
<b>Acrididae</b>	
<i>Zonocerus elegans</i>	elegant grasshopper
<b>Gryllidae</b>	
<i>Ornebius kanetataki</i>	cricket
<b>Tettigoniidae</b>	
<i>Caedicia</i> sp.	-
<i>Holochlora japonica</i>	Japanese broadwinged katydid
<i>Microcentrum retinerve</i>	smaller angular-winged katydid
<i>Scudderia furcata</i>	fork-tailed bush katydid
<b>Psocoptera</b>	
<b>Archipsocidae</b>	
<i>Archipsocus</i> sp.	bark louse
<b>Thysanoptera</b>	
<b>Aeolothripidae</b>	
<i>Franklinothrips vespiformis</i> [Animals Biosecurity]	-
<b>Thripidae</b>	
<i>Chaetanaphothrips orchidii</i>	banana rust thrips
<i>Leptothrips mali</i>	black hunter thrips
<i>Scirtothrips aurantii</i>	citrus thrips
<i>Scirtothrips citri</i>	citrus thrips
<i>Scirtothrips dorsalis</i>	chilli thrips
<i>Scirtothrips mangiferae</i>	mango thrips

<i>Scolothrips sexmaculatus</i> [Animals Biosecurity]	-
<i>Taeniothrips kellyanus</i>	-
<i>Taeniothrips</i> sp.	-
<i>Thrips coloratus</i>	thrips
<i>Thrips flavus</i>	flower thrips
<i>Thrips palmi</i>	palm thrips
<b>Unknown Insecta</b>	
<b>Unknown Insecta</b>	
<i>Cosmophyllum pallidulum</i>	-
<b>Mite</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Acaridae</b>	
<i>Thyreophagus entomophagus italicus</i> [Animals Biosecurity]	-
<b>Anystidae</b>	
<i>Anystis agilis</i> [Animals Biosecurity]	-
<b>Eriophyidae</b>	
<i>Aculops pelekassi</i>	erriophyid mite
<i>Tegolophus australis</i>	brown citrus mite
<b>Phytoseiidae</b>	
<i>Amblyseius addoensis</i> [Animals Biosecurity]	-
<i>Amblyseius citri</i> [Animals Biosecurity]	-
<i>Amblyseius swirskii</i> [Animals Biosecurity]	-
<i>Euseius hibisci</i> [Animals Biosecurity]	-
<i>Euseius scutalis</i> [Animals Biosecurity]	-
<i>Euseius stipulatus</i> [Animals Biosecurity]	-
<i>Euseius tularensis</i> [Animals Biosecurity]	-
<i>Iphiseius degenerans</i> [Animals Biosecurity]	predatory mite
<i>Typhlodromus athiasae</i> [Animals Biosecurity]	-
<b>Stigmaeidae</b>	
<i>Agistemus africanus</i> [Animals Biosecurity]	-
<i>Agistemus tranatalensis</i> [Animals Biosecurity]	-
<i>Eryngiopus siculus</i> [Animals Biosecurity]	-
<b>Tarsonemidae</b>	
<i>Tarsonemus cryptocephalus</i> [Animals Biosecurity]	-
<b>Tenuipalpidae</b>	
<i>Brevipalpus chilensis</i>	false spider mite
<i>Brevipalpus lewisi</i>	bunch mite
<i>Brevipalpus obovatus</i>	privet mite
<i>Tenuipalpus emeticae</i> [Animals Biosecurity]	-
<i>Tuckerella ornata</i>	-
<i>Ultratenuipalpus gonianaensis</i>	tenuipalpid mite
<b>Tetranychidae</b>	
<i>Calacarus citrifolii</i>	clover mite
<i>Eotetranychus kankitus</i>	tetranychid mite
<i>Eotetranychus lewisi</i>	big beaked plum mite
<i>Eotetranychus yumensis</i>	Yumi spider mite
<i>Eutetranychus africanus</i>	tetranychid mite
<i>Eutetranychus banksi</i>	Texas citrus mite
<i>Eutetranychus orientalis</i>	pear leaf blister mite
<i>Oligonychus mangiferus</i>	mango spider mite
<i>Tetranychus kanzawai</i>	kanzawa mite
<b>Tuckerellidae</b>	
<i>Tuckerella knorri</i>	hawthorn spider mite
<b>Spider</b>	
<b>Arachnida</b>	

<b>Araneae</b>	
<b>Clubionidae</b>	
<i>Cheiracanthium mildei</i> [Animals Biosecurity]	-
<b>Theridiidae</b>	
<i>Theridion</i> sp. [Animals Biosecurity]	-
<b>Mollusc</b>	
<b>Gastropoda</b>	
<b>Stylommatophora</b>	
<b>Achatinidae</b>	
<i>Achatina immaculata</i>	-
<i>Lissachatina immaculata</i>	snail
<b>Bradybaenidae</b>	
<i>Acusta despecta sieboldiana</i>	snail
<b>Subulinidae</b>	
<i>Rumina decollata</i>	snail
<b>Urocyclidae</b>	
<i>Urocyclus flavescens</i>	-
<i>Urocyclus kirkii</i>	-
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Diaporthales</b>	
<b>Valsaceae</b>	
<i>Diaporthe rudis</i> (anamorph <i>Phomopsis rudis</i> )	phomopsis canker
<b>Dothideales</b>	
<b>Elsinoaceae</b>	
<i>Elsinoe australis</i>	sweet orange scab
<b>Capnodiaceae</b>	
<i>Capnodium citri</i>	sooty mould
<b>Didymosphaeriaceae</b>	
<i>Didymosphaeria</i> sp.	--
<b>Mycosphaerellaceae</b>	
<i>Guignardia citricarpa</i> (anamorph <i>Phyllosticta citricarpa</i> ) [black spot strain]	citrus black spot
<i>Mycosphaerella citri</i> (anamorph <i>Stenella citri-grisea</i> )	rind blotch
<i>Mycosphaerella horii</i>	greasy spot
<b>Patellariales</b>	
<b>Patellariaceae</b>	
<i>Rhytidhysterium rufulum</i>	--
<b>Saccharomycetales</b>	
<b>Saccharomycetaceae</b>	
<i>Debaryomyces hansenii</i>	-
<i>Galactomyces citri-aurantii</i> (anamorph <i>Geotrichum citri-aurantii</i> )	sour rot
<b>Basidiomycota: Basidiomycetes</b>	
<b>Boletales</b>	
<b>Coniophoraceae</b>	
<i>Coniophora eremophila</i>	brown wood rot
<b>Basidiomycota: Teliomycetes</b>	
<b>Septobasidiales</b>	
<b>Septobasidiaceae</b>	
<i>Septobasidium pseudopedicellatum</i>	felt fungus
<b>Mitosporic Fungi</b>	
<b>Unknown Mitosporic Fungi</b>	
<b>Unknown Mitosporic Fungi</b>	
<i>Sphaceloma fawcettii</i> var. <i>scabiosa</i>	-
<b>Mitosporic Fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	

<b>Sphaerioidaceae</b>	
<i>Macrophoma mantegazziana</i>	-
<i>Phoma erratica</i> var. <i>mikan</i>	--
<i>Phoma tracheiphila</i>	mal secco
<i>Phomopsis</i> sp.	rot
<i>Septoria</i> spp.	-
<i>Sphaeropsis tumefaciens</i>	stem gall
<b>Unknown Coelomycetes</b>	
<b>Unknown Coelomycetes</b>	
<i>Aschersonia placenta</i> [Animals Biosecurity]	--
<i>Gloeosporium foliicolum</i>	fruit rot
<b>Mitosporic Fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	
<b>Dematiaceae</b>	
<i>Alternaria limicola</i>	-
<i>Alternaria pellucida</i>	--
<i>Cercospora microsora</i>	-
<i>Phaeoramularia angolensis</i>	cercospora spot
<i>Stemphylium rosarium</i>	--
<i>Ulocladium obovoideum</i>	ulocladium rot
<b>Unknown Hyphomycetes</b>	
<b>Unknown Hyphomycetes</b>	
<i>Aureobasidium</i> sp.	-
<i>Hirsutella thompsonii</i> [Animals Biosecurity]	--
<i>Isaria</i> sp. [Animals Biosecurity]	-
<i>Oidium tingitaninum</i>	powdery mildew
<i>Sporobolomyces roseus</i>	--
<i>Stenella</i> sp.	--
<b>Zygomycota: Zygomycetes</b>	
<b>Glomales</b>	
<b>Glomaceae</b>	
<i>Glomus etunicatum</i> [Animals Biosecurity]	--
<b>Mucorales</b>	
<b>Syncephalastraceae</b>	
<i>Syncephalastrum racemosum</i>	--
<b>Bacterium</b>	
<b>Bacterium family unknown</b>	
<i>Liberobacter africanum</i>	citrus greening bacterium
<i>Liberobacter asiaticum</i>	citrus greening bacterium
<i>Liberobacter</i> sp.	citrus greening bacterium
<i>Spiroplasma citri</i>	citrus stubborn
<b>Pseudomonadaceae</b>	
<i>Burkholderia cepacia</i>	sour skin
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	citrus canker
<i>Xanthomonas campestris</i> pv. <i>aurantifolii</i>	-
<i>Xanthomonas campestris</i> pv. <i>citrumelo</i>	citrus bacterial spot
<i>Xylella fastidiosa</i>	Pierce's disease
<i>Xylella fastidiosa</i> pv. <i>citri</i>	variegated chlorosis of citrus
<b>Virus</b>	
Indian citrus mosaic badnavirus	-
citrus cachexia viroid	-
citrus chlorotic dwarf	-
citrus infectious variegation ilarvirus	-
citrus infectious variegation ilarvirus [crinkly leaf strain]	-
citrus leaf rugose ilarvirus	-
citrus leathery leaf virus	-

citrus leprosis rhabdovirus	-
citrus mosaic virus	-
citrus ringspot virus	-
citrus tatter leaf capillovirus	-
citrus tristeza closterovirus [strains not in New Zealand]	-
citrus variable viroid	-
citrus viroids (groups I-IV)	-
citrus yellow mosaic badnavirus	-
citrus yellow mottle virus	-
dwarfing factor viroid	-
navel orange infectious mottling virus	-
satsuma dwarf nepovirus	-
satsuma dwarf nepovirus [Natsudaikai dwarf strain]	-
xyloporosis viroid	-
yellow vein clearing of lemon	-

### **Phytoplasma**

<i>Candidatus</i> Phytoplasma aurantifolia	witches' broom phytoplasma
rubbery wood	-

### **Disease of unknown aetiology**

Australian citrus dieback	-
blind pocket	-
bud union disease	-
citrus blight disease	-
citrus fatal yellows	-
citrus impietratura disease	-
citrus sunken vein disease	-
concave gum	-
crisacortis	-
gum pocket	-
gummy bark	-
kassala disease	-
lemon sieve tube necrosis	-
shell bark of lemons	-
zonate chlorosis	-

## Inspection, Testing and Treatment Requirements for *Citrus*\*

ORGANISM TYPES	MAF ACCEPTABLE METHODS
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions).
<b>Mites</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions).
<b>Fungus</b>	Country freedom OR growing season inspection for symptom expression.
<b>Bacterium</b>	
<i>Burkholderia cepacia</i>	Growing season inspection for symptom expression.
<i>Liberobacter africanum</i>	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.
<i>Liberobacter asiaticum</i>	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.
<i>Spiroplasma citri</i>	Country freedom/shoot tip grafting. Graft inoculated sweet orange, 27 to 32°C. Bioassay = culture petiole new flush tissue. Collect tissue after several days at hot temperature (> 30°C) and incubate cultures at 32°C.
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xanthomonas campestris</i> pv. <i>aurantifolii</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xanthomonas campestris</i> pv. <i>citrumelo</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xylella fastidiosa</i>	Country freedom/shoot tip grafting bioassay/ PCR/ELISA OR suitable citrus indicator.
<i>Xylella fastidiosa</i> pv. <i>citri</i>	Country freedom/shoot tip grafting bioassay PCR/ELISA OR suitable citrus indicator.
<b>Virus</b>	
citrus chlorotic dwarf	Country freedom OR graft inoculated rough lemon at cool temperatures 18 to 25°C.
citrus infectious variegation ilarvirus	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow indicators at cool temperatures 18 to 25°C.
citrus infectious variegation ilarvirus [crinkly leaf strain]	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow indicators at cool temperatures 18 to 25°C.
citrus leaf rugose ilarvirus	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators at cool temperatures 18 to 25°C.
citrus leathery leaf virus	Country freedom OR Rangpur lime. Grow indicators at cool temperatures 18 to 25°C.
citrus leprosis rhabdovirus	Country freedom OR graft inoculated sweet orange. Grow indicators at cool temperatures 18 to 25°C.
citrus mosaic virus	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.
citrus ringspot virus	Country freedom OR graft inoculated dweet tangor, sweet orange, mandarin (Parson's Special). Grow indicators at cool temperatures 18 to 25°C.
citrus tatter leaf capillovirus	Country freedom OR graft inoculated Rusk citrange, rough lemon, <i>Citrus excelsa</i> , citrange (Troyer). Grow indicators at cool temperatures 18 to 25°C.
citrus tristeza closterovirus [strains not in New Zealand]	Country freedom OR ELISA, graft inoculated Mexican lime, sour orange and <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
citrus yellow mosaic badnavirus	Country freedom OR graft inoculated sweet orange, sour orange and citron.
citrus yellow mottle virus	Country freedom OR other suitable test.
Indian citrus mosaic badnavirus	Country freedom OR graft inoculated sweet orange at hot temperature 27 to 32°C.
navel orange infectious mottling virus	Country freedom OR graft inoculated Satsums. Grow indicators at cool temperatures 18 to 25°C.

<b>ORGANISM TYPES</b>	<b>MAF ACCEPTABLE METHODS</b>
satsuma dwarf nepovirus	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.
satsuma dwarf nepovirus [Natsudaikai dwarf strain]	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.
yellow vein clearing of lemon	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators at cool temperatures 18 to 25°C.
<b>Viroid</b>	
citrus cachexia viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
citrus variable viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
citrus viroids (groups I-IV)	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
dwarfing factor viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
xyloporosis viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract or mandarin (Parson's Special). Grow Citron at hot temperature 27 to 32°C.
<b>Disease of unknown aetiology</b>	
Australian citrus dieback	Country freedom OR other suitable test
blind pocket	Country freedom OR graft inoculated dweet tangor, sweet orange or <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
bud union disease	Country freedom OR other suitable test
citrus blight disease	None (cuttings collected from blight free area). Inspect source tree after 2 years before releasing from quarantine.
citrus fatal yellows	Country freedom OR graft inoculated <i>Citrus macrophylla</i> .
citrus impietratura disease	Country freedom OR graft inoculated dweet tangor or sweet orange. Growth indicators at cool temperatures 18 to 25°C.
citrus sunken vein disease	Country freedom OR other suitable test.
concave gum	Country freedom OR graft inoculated dweet tangor, sweet orange or <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
crisacortis	Country freedom OR graft inoculated dweet tangor, sweet orange or <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
gum pocket	Country freedom OR graft inoculated dweet tangor, sweet orange or <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
Gummy bark	Country freedom OR SPAGE of graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
Kassala disease	Country freedom, cuttings collected from kassala free area.
lemon sieve tube necrosis	Country freedom OR other suitable test.
shell bark of lemons	Country freedom OR other suitable test.
zonate chlorosis	Country freedom, cuttings collected from kassala free area.
<b>Phytoplasma</b>	
<i>Candidatus</i> phytoplasma aurantifolia	Country freedom OR graft inoculated lime. Grow indicators at cool temperatures 18 to 25°C.
rubbery wood	Country freedom OR graft inoculated sweet orange or lemon. Grow citron at hot temperature 27 to 32°C.

\* Country freedom is accepted as equivalence to a treatment.

### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. With prior notification, MAF will accept other internationally recognised testing methods.

## *Clivia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Clivia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Virus diseases

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

#### **PLUS:**

#### **Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

## *Convallaria*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Convallaria*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Pratylenchus convallariae*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**PEQ:** Level 2

**Minimum Period:** 3 months

### **Additional Declaration:**

"*Pratylenchus convallariae* is not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

## *Corylus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Corylus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Anisogramma anomala*; *Monilinia fructigena*; *Phytophthora ramorum*

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. Whole Plants**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

#### **B. Tissue Culture:**

**PEQ:** Level 3

**Minimum Period:** 3 months

## *Cotoneaster*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Cotoneaster*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Gymnosporangium* spp.; *Xylella fastidiosa*; *Phytophthora ramorum*

### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Gymnosporangium* rusts

Additional declaration: "*Gymnosporangium* spp. are not known to occur on \_\_\_\_\_ (name of plant species) in \_\_\_\_\_ (the country or state where the plants were produced)".

**OR**

"The plants were from a crop inspected during the growing season and no rust diseases were detected".

- b. "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water, prior to export".
- c. Conditions for *Xylella fastidiosa*(see section 2.2.1.11)
- d. Conditions for *Phytophthora ramorum* (see section 2.2.1.10)

#### **B. For Plants in Tissue Culture from All Countries:**

As for **Standard Entry Conditions for Tissue cultures** - see Section 2.2.2.

## *Crataegus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Crataegus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Gymnosporangium clavipes*, *Gymnosporangium globosum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

##### **Option 1**

**PEQ:** Level 2  
**Minimum Period:** 6 months

##### **Additional Declarations:**

1. "*Gymnosporangium clavipes* and *Gymnosporangium globosum* are not known to occur on \_\_\_\_\_(host species being imported) \_\_\_\_\_ in \_\_\_\_\_ (the country or state in which the plants were grown) \_\_\_\_\_".
2. "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water, prior to export".

##### **OPTION 2:**

**PEQ:** Level 3  
**Minimum Period:** 3 months

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Crocoshmia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Frankliniella occidentalis*; virus diseases

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**No import permit is required.**

**PEQ:** None

**Additional Declaration(s):**

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

**OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

## *Crocus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Crocus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Frankliniella occidentalis*; virus diseases

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

#### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

#### **Additional Declaration(s):**

##### **1) For bulbs produced under a MAF-approved Dutch bulb propagation scheme:**

"In addition to inspection of the dormant bulbs prior to shipment, the imported bulbs meet the requirements of the BKD Class 1 or ALG [choose one] bulb certification scheme."

**OR**

##### **2) For bulbs NOT produced under a MAF-approved bulb propagation scheme:**

"In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests."

#### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

**Note:** These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Cycas*”.

**GENERAL CONDITIONS:**

**Approved Countries:** All except Australia, Cayman Islands, China, Costa Rica, Guam, Italy, Puerto Rico, Singapore, Taiwan, Thailand, U.S. Virgin Islands, the USA (Florida and Hawaii) and Vietnam.

**Quarantine Pests:** *Aulacaspis yasumatsui*, *Demyrsus meleoides*.

**Entry Conditions: Basic;** with variations and additional conditions as specified below:

**A. For Cuttings (dormant), including offsets in the form of dormant buds divided from the trunk:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**Inspection Requirements:** A minimum of 600 plants are to be inspected during each inspection in post-entry quarantine

**Additional Declaration:**

"The nursery stock has been sourced from a “Pest free area”, free from *Aulacaspis yasumatsui*"

**B. For Plants in Tissue Culture:**

As for Standard Entry Conditions for Tissue Cultures - see Section 2.2.2.

## *Dahlia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Dahlia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Phymatotrichopsis omnivora*; *Tetranychus kanzawai*; Uredinales

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declarations:**

1. "Rust diseases are not known to occur on *Dahlia* in \_ (the country in which the plants were grown) \_".
2. "The plants have been dipped prior to export in dicofol at the rate of 0.7g a.i. per litre of water".

#### **B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom:**

##### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

##### **Additional Declaration(s):**

##### **1) For bulbs produced under a MAF-approved Dutch bulb propagation scheme:**

"In addition to inspection of the dormant bulbs prior to shipment, the imported bulbs meet the requirements of the BKD Class 1 or ALG [choose one] bulb certification scheme."

**OR**

##### **2) For bulbs NOT produced under a MAF-approved bulb propagation scheme:**

"In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests."

##### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

#### **C. For Dormant Bulbs from the USA:**

**No import permit is required unless the bulbs require post-entry quarantine.**

**PEQ:** None or Level 2 (see below)

##### **Additional Declaration(s):**

1. "In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate

procedures, and considered free of quarantine pests, and practically free from other injurious pests".

2. "The dormant tubers have been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*".

**OR**

(i) "The dormant bulbs have been sourced from a "Pest free place of production", free from *Phymatotrichopsis omnivora*".

AND

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 "Pesticide treatments for dormant bulbs". If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the "Disinfestation and/or Disinfection Treatment" section of the phytosanitary certificate.

AND

(iii) Post-entry quarantine: Upon arrival in New Zealand the dormant bulbs will require a period of at least 3 months in Level 2 post-entry quarantine.

**D. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**PEQ:** Level 1 or Level 2 (see below)

**Minimum Period:** 3 months

**Additional Declaration(s):**

1. "The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

2. "The dormant tubers have been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*".

**OR**

(i) "The dormant bulbs have been sourced from a "Pest free place of production", free from *Phymatotrichopsis omnivora*".

AND

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 "Pesticide treatments for dormant bulbs". If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the "Disinfestation and/or Disinfection Treatment" section of the phytosanitary certificate.

AND

(iii) Post-entry quarantine: Upon arrival in New Zealand the dormant bulbs will require a period of at least 3 months in Level 2 post-entry quarantine.

**E. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

## *Delphinium*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Delphinium*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom, USA.

**Quarantine Pests:** Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

"Rust diseases of genus *Coleosporium* and *Cronatium* are not known to occur on \_\_\_\_\_(the host species being imported)\_\_\_\_\_ in \_\_\_\_\_ (the country in which the plants were grown) \_\_\_\_\_".

#### **B. For Tissue Cultures:**

As for Standard Entry Conditions for Tissue Cultures - see Section 2.2.2.

## *Dianthus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Dianthus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Frankliniella occidentalis*, *Liriomyza* spp., Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

1. "The plants have been inspected in accordance with appropriate official procedures and found to be free of *Frankliniella occidentalis* and *Liriomyza* spp."
2. "The plants were inspected during the growing season and no rust diseases were found"

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Dianthus caryophyllus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Dianthus caryophyllus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Frankliniella occidentalis*, *Liriomyza* spp.

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below.

#### **A. For Whole Plants:**

##### **OPTION 1:**

**PEQ:** Level 2

**Minimum Period:** 3 months

##### **Additional Declaration:**

"The plants have been inspected in accordance with appropriate official procedures and found to be free of *Frankliniella occidentalis* and *Liriomyza* spp."

##### **OPTION 2: (For Netherlands only)**

**PEQ:** Level 2

**Minimum Period:** 4 weeks

##### **Additional Declarations:**

1. "The imported plants meet the requirements of the NAKtuinbouw Elite (Class SEE or EE) [choose one] certification scheme."
2. "The plants have been held at  $1.5^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  for 2 days, then fumigated with methyl bromide at  $14\text{g}/\text{m}^3$  for 4 hours at  $15^{\circ}\text{C}$  and packed so that re-infestation with insects cannot occur."

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Dioscorea*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Dioscorea*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Phymatotrichopsis omnivora*; Virus diseases

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom:**

#### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

#### **Additional Declaration(s):**

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

#### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

#### **C. For Dormant Bulbs from the USA:**

**No import permit is required unless the bulbs require post-entry quarantine.**

**PEQ:** None or Level 2 (see below)

#### **Additional Declaration(s):**

1. "In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests".

2. "The dormant tubers have been sourced from a “Pest free area”, free from *Phymatotrichopsis omnivora*".

#### **OR**

(i) "The dormant bulbs have been sourced from a “Pest free place of production”, free from *Phymatotrichopsis omnivora*".

#### **AND**

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 “Pesticide treatments for dormant bulbs”. If satisfied that the pre-shipment activities have been

undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate.

AND

(iii) Post-entry quarantine: Upon arrival in New Zealand the dormant bulbs will require a period of at least 3 months in Level 2 post-entry quarantine.

**D. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**PEQ:** Level 1 or Level 2 (see below)

**Minimum Period:** 3 months

**Additional Declaration(s):**

1. "The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

2. "The dormant tubers have been sourced from a “Pest free area”, free from *Phymatotrichopsis omnivora*".

**OR**

(i) "The dormant bulbs have been sourced from a “Pest free place of production”, free from *Phymatotrichopsis omnivora*".

AND

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 “Pesticide treatments for dormant bulbs”. If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate.

AND

(iii) Post-entry quarantine: Upon arrival in New Zealand the dormant bulbs will require a period of at least 3 months in Level 2 post-entry quarantine.

**E. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

## *Diospyros*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Diospyros*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Cephalosporium diospyri*; *Xylella fastidiosa*

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

#### **B. For Tissue Culture:**

**PEQ:** Level 3

**Minimum Period:** 3 months

## *Dracaena*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Dracaena*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Chrysomphalus aonidum* and *Xyleborus* spp. (except *Xyleborus compressus*, *Xyleborus truncatus* and *Xyleborus saxeseni*)

**Entry Conditions:** Basic; with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Inspection Requirements:** A minimum of 600 plants are to be inspected during each inspection in post-entry quarantine

#### **Additional declarations:**

"The *Dracaena* cuttings / plants [choose one] in this consignment have been:

- sourced from a “Pest free area” or “Pest free place of production” [choose one], free from *Xyleborus* spp. (except *Xyleborus compressus*, *Xyleborus truncatus* and *Xyleborus saxeseni*).

AND

- sourced from a “Pest free area” or “Pest free place of production” [choose one], free from *Chrysomphalus aonidum*.
- or
- inspected in accordance with appropriate official procedures and found to be free of *Chrysomphalus aonidum*."

#### **Treatments:**

Cuttings (dormant) must be treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions. All other material (whole plants and non-dormant cuttings) must be treated for regulated insects and mites using methyl bromide fumigation as described in section 2.2.1.6 of the basic conditions (methyl bromide may be damaging to some *Dracaena* species and is carried out at the importer’s risk).

#### **B. For Plants in Tissue Culture:**

As for Standard Entry Conditions for Tissue Cultures - see Section 2.2.2.

## *Eriobotrya*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Eriobotrya*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Pseudomonas syringae* pv. *eriobotryae*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2  
**Minimum Period:** 6 months

#### **Additional Declaration:**

"*Pseudomonas syringae* pv. *eriobotryae* is not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

**OR**

"The plants were from a nursery that has been inspected for the presence of *Pseudomonas syringae* pv. *eriobotryae* and none has been detected".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Eucalyptus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Eucalyptus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Puccinia psidii*; *Endothia havanensis*; *Mycosphaerella parva*; *Phytophthora ramorum*

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 6 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

## *Eugenia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Eugenia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Luxembourg, Norway, The Netherlands, Portugal, Spain, Sweden, Switzerland, United Kingdom.

**Quarantine Pests:** *Puccinia psidii*; *Xylella fastidiosa*

### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

- a. Conditions for *Xylella fastidiosa* (see section 2.2.1.11)
- b. Additional declaration: "*Puccinia psidii* is not known to occur in \_\_\_\_\_ (the country or state of origin)\_\_\_\_\_".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Eupatorium*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Eupatorium*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom.

**Quarantine Pests:** Uredinales; *Xylella fastidiosa*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

1. Additional declaration: "Rust diseases of genus *Coleosporium* and *Cronatium* are not known to occur on \_\_\_\_\_(the host species being imported)\_\_\_\_\_ in \_\_\_\_\_ (the country in which the plants were grown) \_\_\_\_\_".

2. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

#### **B. For Tissue Cultures:**

As for Standard Entry Conditions for Tissue Cultures - see Section 2.2.2.

## *Eutrema*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Eutrema*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Japan

**Quarantine Pests:** *Ascochyta brassicae*; *Athalia* spp.; *Eurydema* spp.; *Peronospora alliariae*; *Septoria wasabiae*

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Nursery Stock excluding Tissue Cultures:**

**PEQ:** Level 2  
**Minimum Period:** 3 months

#### **Additional Declaration:**

"Plants have been dipped in captan at the rate of 1.25g a.i. per litre of water within 1 week of export".

#### **Special Condition:**

On arrival in New Zealand the plants are to be treated, under the supervision of an Inspector, at a MAF-registered transitional facility by dipping in metalaxyl or furalaxyl at the rate of 1.2g a.i. per litre of water.

#### **B. For Tissue cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Fagus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Fagus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Cronartium quercuum*; *Phytophthora ramorum*; Tortricidae

### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings (dormant) and Whole Plants (dormant) from:**

**PEQ:** Level 2

**Minimum Period:** 6 months

1. Additional Declaration: "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water."
2. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

**OR**

**PEQ:** Level 3

**Minimum Period:** 6 months

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Fagus sylvatica*

**Note:** These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Fagus sylvatica*”.

### **GENERAL CONDITIONS:**

**Approved Countries:** Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Cronartium quercuum*; *Cryphonectria parasitica*; *Phytophthora ramorum*; Tortricidae

### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants (dormant) and Cuttings (dormant):**

##### **OPTION 1:**

**PEQ:** Level 2

**Minimum Period:** 6 months

##### 1. Conditions for *Cryphonectria parasitica*

- Additional declaration: "*Cryphonectria parasitica* is not known to occur in \_\_\_\_\_ (the country or state where the plants/cuttings) were grown \_\_\_\_\_".

##### **OR** (for cuttings only)

- Additional declaration: "The tree(s), from which this material was taken, was inspected during the previous growing season and no *Cryphonectria parasitica* was detected".

##### **OR** (for young plants)

- Additional declaration: "The plants were inspected during the previous growing season and no *Cryphonectria parasitica* was detected".

##### 2. Additional declaration: "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water."

##### 3. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

##### **OPTION 2:**

**PEQ:** Level 3

**Minimum Period:** 6 months

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF Biosecurity registered laboratory at the Importers expense, prior to release to the Importer.

## *Ficus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Ficus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Uredo ficina*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **For Whole Plants and Tissue Culture:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

"*Uredo ficina* is not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

OR

“The *Ficus* spp. has been sourced from a pest free place of production, free from *Uredo ficina*”

**Note:** Nursery stock of *Ficus microcarpa* must be free of flowers and fruit.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Fortunella*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Fortunella* nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

**2. Pests of *Fortunella***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Fortunella* cuttings from offshore MAF-accredited facilities (quarantine stations)**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Fortunella*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Fortunella*.

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Fortunella* cuttings exported to New Zealand.

(ii) Inspection, Testing and Treatments of the consignment

The inspection, testing and treatment requirements for specified regulated pests must be undertaken at the accredited facility as specified in the agreement between MAF and the accredited facility operator. Refer to *Fortunella* Inspection, Testing and Treatment Requirements following the *Fortunella* pest list.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Fortunella* cuttings have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

AND

- sourced from either mother plants that have been kept in insect proof plant houses or from open ground mother plants

AND

- held and tested for/classified free from specified regulated pests at a MAF-accredited facility

AND

- held in a manner to ensure that infestation/reinfestation does not occur, following testing (and certification) at the accredited facility.

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country

NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:

"The *Fortunella* cuttings in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with New Zealand's current phytosanitary requirements.

AND

- sourced from mother plants that have been kept in insect proof plant houses/sourced from open ground mother plants [choose one].

AND

- held and tested for/classified free from specified regulated pests at the accredited facility as required in the agreement between MAF and the accredited facility operator.

AND

- held in a manner to ensure infestation/reinfestation does not occur following testing (and certification), at the accredited facility."

(v) Post-entry quarantine

**PEQ:** Level 2

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pathogens. Indicative minimum quarantine periods are: 6 months for *Fortunella* cuttings sourced from mother plants that have been kept in insect proof plant houses, or 16 months for *Fortunella* cuttings sourced directly from open ground mother plants. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.2 *Fortunella* cuttings from non-accredited facilities in any country

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Fortunella* cuttings exported to New Zealand.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Fortunella* cuttings have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

(iii) Additional declarations to the phytosanitary certificate

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

"The *Fortunella* cuttings in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with

the current phytosanitary requirements of MAF."

(iv) Inspection, Testing and Treatments of the consignment

Following inspection at the border, upon arrival, the *Fortunella* cuttings will be directed to a facility accredited to the MAF standard BMG-STD-TREAT: *Approval of Suppliers Providing Treatment of Imported Risk Goods and Forestry/Plant Related Material for Export*, to be sprayed/dipped in MAF-approved miticide and insecticides as described in section 2.2.1.6 of the basic conditions.

Following treatment, testing for specified regulated pests must be undertaken at a New Zealand Level 3 MAF-accredited facility. Refer to *Fortunella* Inspection, Testing and Treatment Requirements following the *Fortunella* pest list.

(v) Post-entry quarantine

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pathogens. 16 months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments are required.

### **3.3 *Fortunella* plants in tissue culture from offshore MAF-accredited facilities**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Fortunella*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Fortunella*.

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Fortunella* tissue culture exported to New Zealand.

(ii) Pest proof container and growing media for tissue culture

Cultures imported in a growing media must have been grown in the vessel in which they are imported. The container must be rigid, and either clear plastic or clear glass. The tissue culture media must not contain charcoal.

(iii) Inspection, Testing and Treatments of the consignment

The inspection, treatment and testing requirements for specified pests must be undertaken at the accredited facility as specified in the arrangement between MAF and the accredited facility operator. Refer to *Fortunella* Inspection, Testing and Treatment Requirements following the *Fortunella* pest list.

(iv) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Fortunella* tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

AND

- held and tested for/classified free from specified regulated pests at a MAF-accredited facility and,

AND

- held in a manner to ensure that infestation/reinfestation does not occur, following testing (and certification) at the accredited facility.

(v) Additional declarations to the phytosanitary certificate

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

"The *Fortunella* tissue culture in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with New Zealand's current phytosanitary requirements.

AND

- held and tested for/classified free from specified regulated pests at the accredited facility as specified in the agreement between MAF and the accredited facility operator.

AND

- held in a manner to ensure infestation/reinfestation does not occur following testing (and certification), at the accredited facility."

(vi) Post-entry quarantine

**PEQ:** Level 2

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pests. Six months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments are required.

### 3.4 *Fortunella* plants in tissue culture from non-accredited facilities in any country

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Fortunella* nursery stock exported to New Zealand.

(ii) Pest proof container and growing media for tissue culture

Cultures imported in a growing media must have been grown in the vessel in which they are imported. The container must be rigid, and either clear plastic or clear glass. The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Fortunella* tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

(iv) Additional declarations to the phytosanitary certificate

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

"The *Fortunella* tissue culture in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with the current phytosanitary requirements of MAF."

(v) Inspection, Testing and Treatments of the consignment

Upon arrival, the inspection, treatment and testing requirements for specified pests must be undertaken at a New Zealand Level 3 MAF-accredited facility. Refer to *Fortunella* Inspection, Testing and Treatment Requirements following the *Fortunella* pest list.

(vi) Post-entry quarantine

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and or indexing to detect regulated pests. 16 months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected or treatments required.

## Pest List for *Fortunella*

### REGULATED PESTS (actionable)

#### Insect

#### Insecta

##### Coleoptera

##### Bostrichidae

*Apate indistincta*

shot-hole borer

*Apate terebrans*

shot-hole borer

##### Buprestidae

*Agrilus alesi*

flatheaded citrus borer

*Agrilus auriventris*

citrus flatheaded borer

##### Cerambycidae

*Anoplophora malasiaca*

white-spotted longicorn beetle

*Chelidonium gibbicolle*

-

*Dihammus vastator*

fig longhorn

*Melanauster chinensis*

-

*Paradisterna plumifera*

speckled longicorn

*Promeces linearis*

-

*Skeletodes tetrops*

longhorn beetle

*Strongylurus thoracicus*

pittosporum longicorn

*Uracanthus cryptophagus*

citrus branch borer

##### Chrysomelidae

*Colasposoma fulgidum*

bluegreen citrus nibbler

*Colasposoma scutellare*

-

*Geloptera porosa*

pitted apple beetle

*Luperomorpha funesta*

mulberry flea beetle

*Monolepta australis*

red-shouldered leaf beetle

*Sebaethe fulvipennis*

flea beetle

##### Coccinellidae

*Cheilomenes lunata* [Animals Biosecurity]

-

*Chilocorus cacti* [Animals Biosecurity]

-

*Chilocorus distigma* [Animals Biosecurity]

-

*Chilocorus nigrita* [Animals Biosecurity]

-

*Exochomus flavipes* [Animals Biosecurity]

-

*Pentilia castanea* [Animals Biosecurity]

-

*Rhyzobius lophanthae* [Animals Biosecurity]

-

*Scymnus nanus* [Animals Biosecurity]

-

*Serangium parcesetosum* [Animals Biosecurity]

-

*Stethorus aethiops* [Animals Biosecurity]

-

*Stethorus histrio* [Animals Biosecurity]

-

*Stethorus punctata picipes* [Animals Biosecurity]

-

##### Curculionidae

*Amystax fasciatus* [Animals Biosecurity]

-

*Artipus* sp.

-

*Brachycerus citriperda*

-

*Callirhopalus bifasciatus*

two-banded Japanese weevil

*Dereodus reticollis*

-

*Diaprepes abbreviatus*

citrus weevil

*Diaprepes* spp.

-

*Eutinophaea bicristata*

citrus leaf-eating weevil

*Leptopius squalidus*

fruit tree root weevil

*Naupactus xanthographus*

fruit tree weevil

*Otiorhynchus cribricollis*

cribrate weevil

*Pachnaeus citri*

-

*Pachnaeus litus*

citrus root weevil

*Perperus lateralis*

white-striped weevil

<i>Prepodes</i> spp.	-
<i>Protostrophus avidus</i>	weevil
<i>Sciobius marshalli</i>	citrus snout beetle
<i>Sympiezomias lewisi</i>	-
<b>Lucanidae</b>	
<i>Prosopocoilus spencei</i>	-
<b>Scarabaeidae</b>	
<i>Hypopholis indistincta</i>	scarab beetle
<i>Maladera matrida</i>	scarab beetle
<b>Scolytidae</b>	
<i>Salagena</i> sp.	-
<i>Xylosandrus germanus</i>	alnus ambrosia beetle
<b>Diptera</b>	
<b>Cecidomyiidae</b>	
<i>Contarinia citri</i>	leafcurling midge
<i>Contarinia okadai</i>	citrus flower gall midge
<i>Trisopsis</i> sp.	-
<b>Chamaemyiidae</b>	
<i>Leucopis alticeps</i> [Animals Biosecurity]	-
<b>Drosophilidae</b>	
<i>Drosophila paulistorum</i>	-
<i>Drosophila pseudoobscura</i>	-
<i>Drosophila simulans</i>	-
<i>Drosophila willistoni</i>	-
<b>Tephritidae</b>	
<i>Dirioxa pornia</i>	island fruit fly
<b>Hemiptera</b>	
<b>Anthocoridae</b>	
<i>Orius thripoborus</i> [Animals Biosecurity]	-
<i>Thriplops thripoborus</i> [Animals Biosecurity]	-
<b>Coreidae</b>	
<i>Acanthocoris striicornis</i>	larger squash bug
<i>Anoplocnemis curvipes</i>	coreid bug
<i>Leptoglossus membranaceus</i>	coreid bug
<i>Mictis profana</i>	crusader bug
<i>Paradasynus spinosus</i>	squash bug
<i>Veneza phyllopus</i>	leaf-footed bug
<b>Lygaeidae</b>	
<i>Nysius vinitor</i>	Rutherglen bug
<b>Miridae</b>	
<i>Austropeplus</i> sp.	citrus blossom bug
<b>Pentatomidae</b>	
<i>Antestia variegata</i>	antestia bug
<i>Antestiopsis orbitalis</i>	-
<i>Antestiopsis variegata</i>	antestia bug
<i>Biprorulus bibax</i>	spined citrus bug
<i>Glaucias subpunctatus</i>	polished green stink bug
<i>Halyomorpha mista</i>	brown-marmorated stink bug
<i>Musgraveia sulciventris</i>	bronze orange bug
<i>Plautia stali</i>	oriental stink bug
<i>Rhynchocoris humeralis</i>	pentatomid bug
<b>Unknown Hemiptera</b>	
<i>Holopterna vulga</i>	bug
<b>Homoptera</b>	
<b>Aleyrodidae</b>	
<i>Aleurocanthus citripertus</i>	whitefly
<i>Aleurocanthus spiniferus</i>	orange spiny whitefly
<i>Aleurocanthus</i> spp.	whiteflies
<i>Aleurocanthus woglumi</i>	citrus blackfly

<i>Aleurodicus dispersus</i>	spiralling whitefly
<i>Aleurolobus marlatti</i>	Marlatt whitefly
<i>Aleuroplatus</i> sp.	whitefly
<i>Aleurothrixus floccosus</i>	woolly whitefly
<i>Aleurotuba jelinekii</i>	-
<i>Aleurotuberculatus aucubae</i>	aucuba whitefly
<i>Bemisia citricola</i>	-
<i>Dialeurodes citri</i>	citrus whitefly
<i>Dialeurodes citrifolii</i>	cloudywinged whitefly
<i>Dialeurolonga</i> sp.	-
<i>Parabemisia myricae</i>	Japanese bayberry whitefly
<i>Siphoninus phillyreae</i>	phillyrea whitefly
<b>Aphididae</b>	
<i>Aphis fabae</i>	bean aphid
<i>Aulacorthum magnoliae</i>	Japanese elder aphid
<b>Cicadellidae</b>	
<i>Asymmetrasca decedens</i>	leafhopper
<i>Circulifer opacipennis</i>	-
<i>Circulifer tenellus</i>	beet leafhopper
<i>Cuerna costalis</i>	leafhopper
<i>Edwardsiana flavescens</i>	leafhopper
<i>Empoasca bodenheimeri</i>	-
<i>Empoasca citrusa</i>	green citrus leafhopper
<i>Empoasca decipiens</i>	green leafhopper
<i>Empoasca distinguenda</i>	-
<i>Empoasca fabae</i>	potato leafhopper
<i>Empoasca onukii</i>	tea green leafhopper
<i>Homalodisca coagulata</i>	glassy-winged sharpshooter
<i>Homalodisca lacerta</i>	-
<i>Jacobiasca lybica</i>	cotton jassid
<i>Nealiturus haematoceps</i>	leafhopper
<i>Penthimiola bella</i>	citrus leafhopper
<i>Scaphytopius nitridus</i>	leafhopper
<b>Cicadidae</b>	
<i>Cryptotympana facialis</i>	black cicada
<i>Meimuna opalifera</i>	elongate cicada
<b>Coccidae</b>	
<i>Ceroplastes floridensis</i>	Florida wax scale
<i>Ceroplastes japonicus</i>	pink wax scale
<i>Ceroplastes rubens</i>	red wax scale
<i>Ceroplastes rusci</i>	fig wax scale
<i>Coccus celatus</i>	-
<i>Coccus pseudomagnoliarum</i>	citricola scale
<i>Coccus viridis</i>	green scale
<i>Cribrolecanium andersoni</i>	white powdery scale
<i>Gascardia brevicauda</i>	white waxy scale
<i>Protopulvinaria pyriformis</i>	pyriform scale
<i>Pulvinaria aethiopica</i>	soft green scale
<i>Pulvinaria aurantii</i>	citrus cottony scale
<i>Pulvinaria cellulosa</i>	pulvinaria scale
<i>Saissetia citricola</i>	citrus string cottony scale
<i>Saissetia somereni</i>	-
<b>Dactylopiidae</b>	
<i>Dactylopius filamentosis</i>	-
<i>Dactylopius vastator</i>	-
<b>Diaspididae</b>	
<i>Aonidiella citrina</i>	yellow scale
<i>Chrysomphalus aonidium</i>	Florida red scale
<i>Chrysomphalus bifasciculatus</i>	brown scale

<i>Chrysomphalus dictyospermi</i>	dictyospermum scale
<i>Chrysomphalus pinnulifera</i>	false purple scale
<i>Ischnaspis longirostris</i>	black thread scale
<i>Lepidosaphes beckii</i>	purple scale
<i>Lepidosaphes gloverii</i>	Glover scale
<i>Parlatoria ziziphi</i>	black parlatoria scale
<i>Pseudaonidia duplex</i>	camphor scale
<i>Selenaspidus articulatus</i>	West Indian red scale
<i>Unaspis citri</i>	citrus snow scale
<i>Unaspis yanonensis</i>	Japanese citrus scale
<b>Flatidae</b>	
<i>Colgar peracuta</i>	-
<i>Geisha distinctissima</i>	green broad-winged planthopper
<i>Lawana conspersa</i>	green flatid planthopper
<i>Metcalfa pruinosa</i>	planthopper
<b>Fulgoridae</b>	
<i>Anzora unicolor</i>	-
<b>Margarodidae</b>	
<i>Drosicha howardi</i>	persimmon mealybug
<i>Icerya seychellarum</i>	Seychelles scale
<b>Ortheziidae</b>	
<i>Nipponorthezia ardisiae</i>	ensign scale
<b>Pseudococcidae</b>	
<i>Allococcus</i> spp.	-
<i>Ferrisia consobrina</i>	mealybug
<i>Ferrisia virgata</i>	striped mealybug
<i>Nipaecoccus vastator</i>	nipa mealybug
<i>Nipaecoccus viridis</i>	hibiscus mealybug
<i>Paracoccus burnerae</i>	spherical mealybug
<i>Planococcus kraunhiae</i>	Japanese wisteria mealybug
<i>Planococcus lilacinus</i>	citrus mealybug
<i>Planococcus minor</i>	passionvine mealybug
<i>Pseudococcus citriculus</i>	smaller citrus mealybug
<i>Pseudococcus commonus</i>	-
<i>Pseudococcus filamentosus</i>	mealybug
<i>Rastrococcus spinosus</i>	mealybug
<i>Rhizoecus kondonis</i>	Kondo mealybug
<b>Psyllidae</b>	
<i>Diaphorina citri</i>	citrus psyllid
<i>Trioza erytrae</i> [vector]	citrus psyllid
<b>Ricaniidae</b>	
<i>Scolypopa</i> sp.	-
<b>Tropiduchidae</b>	
<i>Tambinia</i> sp.	-
<b>Hymenoptera</b>	
<b>Aphelinidae</b>	
<i>Aphytis africanus</i> [Animals Biosecurity]	-
<i>Aphytis holoxanthus</i> [Animals Biosecurity]	-
<i>Aphytis lepidosaphes</i> [Animals Biosecurity]	-
<i>Aphytis lingnanensis</i> [Animals Biosecurity]	-
<i>Aphytis melinus</i> [Animals Biosecurity]	-
<i>Azotus platensis</i> [Animals Biosecurity]	-
<i>Cales noacki</i> [Animals Biosecurity]	-
<i>Cales orchamoplati</i> [Animals Biosecurity]	-
<i>Centrodora penthimiae</i> [Animals Biosecurity]	-
<i>Coccophagus caridei</i> [Animals Biosecurity]	-
<i>Coccophagus pulvinariae</i> [Animals Biosecurity]	-
<i>Encarsia ectophaga</i> [Animals Biosecurity]	-
<i>Encarsia lahorensis</i> [Animals Biosecurity]	-

<i>Encarsia lounsburyi</i> [Animals Biosecurity]	-
<i>Encarsia opulenta</i> [Animals Biosecurity]	-
<i>Encarsia smithi</i> [Animals Biosecurity]	-
<i>Eretmocerus serius</i> [Animals Biosecurity]	-
<i>Marietta connecta</i> [Animals Biosecurity]	-
<i>Marietta leopardina</i> [Animals Biosecurity]	-
<b>Braconidae</b>	
<i>Apanteles aristotalilae</i> [Animals Biosecurity]	-
<i>Biosteres longicaudatus</i> [Animals Biosecurity]	-
<i>Pholetesor ornigis</i> [Animals Biosecurity]	-
<b>Encyrtidae</b>	
<i>Anicetus beneficus</i> [Animals Biosecurity]	-
<i>Comperiella bifasciata</i> [Animals Biosecurity]	-
<i>Habrolepis rouxi</i> [Animals Biosecurity]	-
<i>Leptomastix dactylopii</i> [Animals Biosecurity]	parasitic wasp
<i>Metaphycus helvolus</i> [Animals Biosecurity]	-
<i>Metaphycus luteolus</i> [Animals Biosecurity]	-
<i>Metaphycus stanleyi</i> [Animals Biosecurity]	-
<i>Metaphycus varius</i> [Animals Biosecurity]	-
<i>Psyllaephagus pulvinatus</i> [Animals Biosecurity]	-
<b>Eulophidae</b>	
<i>Aprostocetus ceroplastae</i> [Animals Biosecurity]	-
<i>Elachertus fenestratus</i> [Animals Biosecurity]	-
<i>Tamarixia radiatus</i> [Animals Biosecurity]	-
<b>Eupelmidae</b>	
<i>Anastatus biproruli</i> [Animals Biosecurity]	-
<b>Eurytomidae</b>	
<i>Bruchophagus fellis</i>	citrus gall midge
<b>Formicidae</b>	
<i>Acromyrmex octospinosus</i>	leaf-cutting ant
<i>Anoplolepis braunsi</i> [Animals Biosecurity]	-
<i>Anoplolepis custodiens</i>	ant
<i>Anoplolepis steingroeveri</i> [Animals Biosecurity]	black ant
<i>Atta cephalotes</i>	leaf-cutting ant
<i>Atta sexdens</i>	-
<i>Atta texana</i>	Texas leaf-cutting ant
<i>Camponotus rufoglaucus</i>	-
<i>Crematogaster castanea</i>	-
<i>Crematogaster liengmei</i>	-
<i>Crematogaster peringueyi</i> [Animals Biosecurity]	cocktail ant
<i>Lepisiota capensis</i> [Animals Biosecurity]	-
<i>Myrmecaria natalensis</i>	-
<i>Pheidole tenuinodis</i>	ant
<i>Polyrhachis schistaceus</i>	ant
<i>Solenopsis invicta</i> [Animals Biosecurity]	red imported fire ant
<i>Tapinoma arnoldi</i>	-
<i>Technomyrmex albipes foreli</i> [Animals Biosecurity]	-
<b>Mymaridae</b>	
<i>Chaetomyrmex gracile</i> [Animals Biosecurity]	-
<i>Chaetomyrmex lepidum</i> [Animals Biosecurity]	-
<i>Gonatocerus incomptus</i> [Animals Biosecurity]	-
<b>Platygasteridae</b>	
<i>Amitus hesperidum</i> [Animals Biosecurity]	-
<i>Amitus spiniferus</i> [Animals Biosecurity]	-
<i>Fidiobia citri</i> [Animals Biosecurity]	-
<b>Scelionidae</b>	
<i>Trissolcus oeneus</i> [Animals Biosecurity]	-
<i>Trissolcus oenone</i> [Animals Biosecurity]	-
<i>Trissolcus ogyges</i> [Animals Biosecurity]	-

<b>Signiphoridae</b>	
<i>Signiphora fax</i> [Animals Biosecurity]	-
<i>Signiphora flavella</i> [Animals Biosecurity]	-
<i>Signiphora perpauca</i> [Animals Biosecurity]	-
<b>Trichogrammatidae</b>	
<i>Trichogramma platneri</i> [Animals Biosecurity]	-
<b>Vespidae</b>	
<i>Polistes</i> spp. [Animals Biosecurity]	paper wasps
<b>Isoptera</b>	
<b>Termitidae</b>	
<i>Odontotermes lokanandi</i>	termite
<b>Lepidoptera</b>	
<b>Arctiidae</b>	
<i>Lemyra imparilis</i>	mulberry tiger moth
<b>Blastobasidae</b>	
<i>Holcocera iceryaeella</i>	-
<b>Cosmopterigidae</b>	
<i>Pyroderces rileyi</i>	pink scavenger caterpillar
<b>Geometridae</b>	
<i>Anacamptodes fragilaria</i>	koa haole looper
<i>Ascotis selenaria reciprocaria</i>	citrus looper
<i>Gymnoscelis rufifasciata</i>	geometrid moth
<i>Hyposidra talaca</i>	-
<b>Gracillariidae</b>	
<i>Phyllocnistis citrella</i>	citrus leafminer
<b>Hepialidae</b>	
<i>Endoclita excrescens</i>	Japanese swift moth
<i>Endoclita sinensis</i>	-
<b>Lycaenidae</b>	
<i>Virachola isocrates</i>	pomegranate butterfly
<b>Lymantriidae</b>	
<i>Orgyia vetusta</i>	western tussock moth
<b>Metarbelidae</b>	
<i>Indarbela tetraonis</i>	stem borer
<b>Noctuidae</b>	
<i>Arcte coerula</i>	fruit-piercing moth
<i>Eudocima fullonia</i>	fruit-piercing moth
<i>Helicoverpa assulta</i>	cape gooseberry budworm
<i>Helicoverpa punctigera</i>	oriental tobacco budworm
<i>Tiracola plagiata</i>	banana fruit caterpillar
<i>Xylomyges curialis</i>	noctuid moth
<b>Nymphalidae</b>	
<i>Charaxes jasius</i>	nymphalid butterfly
<b>Oecophoridae</b>	
<i>Psorosticha melanocrepida</i>	citrus leafroller
<i>Psorosticha zizyphi</i>	citrus leafroller
<i>Stathmopoda auriferella</i>	apple heliodinid
<b>Papilionidae</b>	
<i>Papilio aegeus aegeus</i>	-
<i>Papilio anactus</i>	small citrus butterfly
<i>Papilio cresphontes</i>	orange dog
<i>Papilio dardanus cenea</i>	-
<i>Papilio demodocus</i>	orange dog
<i>Papilio demoleus demoleus</i>	-
<i>Papilio helenus nicconicolens</i>	-
<i>Papilio machaon asiatica</i>	-
<i>Papilio memnon</i>	citrus swallowtail
<i>Papilio memnon thunbergii</i>	-
<i>Papilio nireus lyaeus</i>	-

<i>Papilio polytes polytes</i>	-
<i>Papilio protenor demetrius</i>	-
<i>Papilio xuthus</i>	citrus swallowtail
<i>Papilio zelicaon</i>	anise swallowtail
<b>Psychidae</b>	
<i>Eumeta hardenbergi</i>	-
<i>Eumeta japonica</i>	-
<i>Eumeta minuscula</i>	tea bagworm
<i>Eumeta moddermanni</i>	-
<i>Hyalarcta huebneri</i>	leaf case moth
<b>Pyralidae</b>	
<i>Apomyelois ceratoniae</i>	date pyralid
<b>Tortricidae</b>	
<i>Adoxophyes</i> sp.	-
<i>Amorbia cuneana</i>	leafroller
<i>Archips argyrospilus</i>	fruit tree leafroller
<i>Archips machlopiis</i>	leafroller
<i>Archips occidentalis</i>	leafroller
<i>Archips rosanus</i>	rose leafroller
<i>Argyrotaenia citrana</i>	orange tortrix
<i>Cacoecimorpha pronubana</i>	carnation leafroller
<i>Cryptophlebia batrachopa</i>	-
<i>Cryptophlebia leucotreta</i>	false codling moth
<i>Homona magnanima</i>	oriental tea tortrix
<i>Isotenes miserana</i>	orange fruitborer
<i>Platynota stultana</i>	omnivorous leafroller
<i>Tortrix capensana</i>	tortricid moth
<b>Yponomeutidae</b>	
<i>Prays citri</i>	citrus flower moth
<i>Prays parilis</i>	citrus flower moth
<b>Neuroptera</b>	
<b>Chrysopidae</b>	
<i>Chrysopa oculata</i> [Animals Biosecurity]	-
<b>Coniopterygidae</b>	
<i>Coniopteryx vicina</i> [Animals Biosecurity]	-
<i>Conwentzia barretti</i> [Animals Biosecurity]	-
<b>Orthoptera</b>	
<b>Acrididae</b>	
<i>Zonocerus elegans</i>	elegant grasshopper
<b>Gryllidae</b>	
<i>Ornebius kanetataki</i>	cricket
<b>Tettigoniidae</b>	
<i>Caedicia</i> sp.	-
<i>Holochlora japonica</i>	Japanese broadwinged katydid
<i>Microcentrum retinerve</i>	smaller angular-winged katydid
<i>Scudderia furcata</i>	fork-tailed bush katydid
<b>Psocoptera</b>	
<b>Archipsocidae</b>	
<i>Archipsocus</i> sp.	bark louse
<b>Thysanoptera</b>	
<b>Aeolothripidae</b>	
<i>Franklinothrips vespiformis</i> [Animals Biosecurity]	-
<b>Thripidae</b>	
<i>Chaetanaphothrips orchidii</i>	banana rust thrips
<i>Leptothrips mali</i>	black hunter thrips
<i>Scirtothrips aurantii</i>	citrus thrips
<i>Scirtothrips citri</i>	citrus thrips
<i>Scirtothrips dorsalis</i>	chilli thrips
<i>Scirtothrips mangiferae</i>	mango thrips

<i>Scolothrips sexmaculatus</i> [Animals Biosecurity]	-
<i>Taeniothrips kellyanus</i>	-
<i>Taeniothrips</i> sp.	-
<i>Thrips coloratus</i>	thrips
<i>Thrips flavus</i>	flower thrips
<i>Thrips palmi</i>	palm thrips
<b>Unknown Insecta</b>	
<b>Unknown Insecta</b>	
<i>Cosmophyllum pallidulum</i>	-
<b>Mite</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Acaridae</b>	
<i>Thyreophagus entomophagus italicus</i> [Animals Biosecurity]	-
<b>Anystidae</b>	
<i>Anystis agilis</i> [Animals Biosecurity]	-
<b>Eriophyidae</b>	
<i>Aculops pelekassi</i>	eriphyid mite
<i>Tegolophus australis</i>	brown citrus mite
<b>Phytoseiidae</b>	
<i>Amblyseius addoensis</i> [Animals Biosecurity]	-
<i>Amblyseius citri</i> [Animals Biosecurity]	-
<i>Amblyseius wirskii</i> [Animals Biosecurity]	-
<i>Euseius hibisci</i> [Animals Biosecurity]	-
<i>Euseius scutalis</i> [Animals Biosecurity]	-
<i>Euseius stipulatus</i> [Animals Biosecurity]	-
<i>Euseius tularensis</i> [Animals Biosecurity]	-
<i>Iphiseius degenerans</i> [Animals Biosecurity]	predatory mite
<i>Typhlodromus athiasae</i> [Animals Biosecurity]	-
<b>Stigmaeidae</b>	
<i>Agistemus africanus</i> [Animals Biosecurity]	-
<i>Agistemus tranatalensis</i> [Animals Biosecurity]	-
<i>Eryngiopus siculus</i> [Animals Biosecurity]	-
<b>Tarsonemidae</b>	
<i>Tarsonemus cryptocephalus</i> [Animals Biosecurity]	-
<b>Tenuipalpidae</b>	
<i>Brevipalpus chilensis</i>	false spider mite
<i>Brevipalpus lewisi</i>	bunch mite
<i>Brevipalpus obovatus</i>	privet mite
<i>Tenuipalpus emeticae</i> [Animals Biosecurity]	-
<i>Tuckerella ornata</i>	-
<i>Ultratenuipalpus gonianaensis</i>	tenuipalpid mite
<b>Tetranychidae</b>	
<i>Calacarus citrifolii</i>	clover mite
<i>Eotetranychus kankitus</i>	tetranychid mite
<i>Eotetranychus lewisi</i>	big beaked plum mite
<i>Eotetranychus yumensis</i>	Yumi spider mite
<i>Eutetranychus africanus</i>	tetranychid mite
<i>Eutetranychus banksi</i>	Texas citrus mite
<i>Eutetranychus orientalis</i>	pear leaf blister mite
<i>Oligonychus mangiferus</i>	mango spider mite
<i>Tetranychus kanzawai</i>	kanzawa mite
<b>Tuckerellidae</b>	
<i>Tuckerella knorri</i>	hawthorn spider mite
<b>Spider</b>	
<b>Arachnida</b>	

<b>Araneae</b>	
<b>Clubionidae</b>	
<i>Cheiracanthium mildei</i> [Animals Biosecurity]	-
<b>Theridiidae</b>	
<i>Theridion</i> sp. [Animals Biosecurity]	-
<b>Mollusc</b>	
<b>Gastropoda</b>	
<b>Stylommatophora</b>	
<b>Achatinidae</b>	
<i>Achatina immaculata</i>	-
<i>Lissachatina immaculata</i>	snail
<b>Bradybaenidae</b>	
<i>Acusta despecta sieboldiana</i>	snail
<b>Subulinidae</b>	
<i>Rumina decollata</i>	snail
<b>Urocyclidae</b>	
<i>Urocyclus flavescens</i>	-
<i>Urocyclus kirkii</i>	-
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Diaporthales</b>	
<b>Valsaceae</b>	
<i>Diaporthe rudis</i> (anamorph <i>Phomopsis rudis</i> )	phomopsis canker
<b>Dothideales</b>	
<b>Elsinoaceae</b>	
<i>Elsinoe australis</i>	sweet orange scab
<b>Capnodiaceae</b>	
<i>Capnodium citri</i>	sooty mould
<b>Didymosphaeriaceae</b>	
<i>Didymosphaeria</i> sp.	--
<b>Mycosphaerellaceae</b>	
<i>Guignardia citricarpa</i> (anamorph <i>Phyllosticta citricarpa</i> ) [black spot strain]	citrus black spot
<i>Mycosphaerella citri</i> (anamorph <i>Stenella citri-grisea</i> )	rind blotch
<i>Mycosphaerella horii</i>	greasy spot
<b>Patellariales</b>	
<b>Patellariaceae</b>	
<i>Rhytidhysteron rufulum</i>	--
<b>Saccharomycetales</b>	
<b>Saccharomycetaceae</b>	
<i>Debaryomyces hansenii</i>	-
<i>Galactomyces citri-aurantii</i> (anamorph <i>Geotrichum citri-aurantii</i> )	sour rot
<b>Basidiomycota: Basidiomycetes</b>	
<b>Boletales</b>	
<b>Coniophoraceae</b>	
<i>Coniophora eremophila</i>	brown wood rot
<b>Basidiomycota: Teliomycetes</b>	
<b>Septobasidiales</b>	
<b>Septobasidiaceae</b>	
<i>Septobasidium pseudopedicellatum</i>	felt fungus
<b>Mitosporic Fungi</b>	
<b>Unknown Mitosporic Fungi</b>	
<b>Unknown Mitosporic Fungi</b>	
<i>Sphaceloma fawcettii</i> var. <i>scabiosa</i>	-
<b>Mitosporic Fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	

<b>Sphaerioidaceae</b>	
<i>Macrophoma mantegazziana</i>	-
<i>Phoma erratica</i> var. <i>mikan</i>	--
<i>Phoma tracheiphila</i>	mal secco
<i>Phomopsis</i> sp.	rot
<i>Septoria</i> spp.	-
<i>Sphaeropsis tumefaciens</i>	stem gall
<b>Unknown Coelomycetes</b>	
<b>Unknown Coelomycetes</b>	
<i>Aschersonia placenta</i> [Animals Biosecurity]	--
<i>Gloeosporium foliicolum</i>	fruit rot
<b>Mitosporic Fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	
<b>Dematiaceae</b>	
<i>Alternaria limicola</i>	-
<i>Alternaria pellucida</i>	--
<i>Cercospora microsora</i>	-
<i>Phaeoramularia angolensis</i>	cercospora spot
<i>Stemphylium rosarium</i>	--
<i>Ulocladium obovoideum</i>	ulocladium rot
<b>Unknown Hyphomycetes</b>	
<b>Unknown Hyphomycetes</b>	
<i>Aureobasidium</i> sp.	-
<i>Hirsutella thompsonii</i> [Animals Biosecurity]	--
<i>Isaria</i> sp. [Animals Biosecurity]	-
<i>Oidium tingitaninum</i>	powdery mildew
<i>Sporobolomyces roseus</i>	--
<i>Stenella</i> sp.	--
<b>Zygomycota: Zygomycetes</b>	
<b>Glomales</b>	
<b>Glomaceae</b>	
<i>Glomus etunicatum</i> [Animals Biosecurity]	--
<b>Mucorales</b>	
<b>Syncephalastraceae</b>	
<i>Syncephalastrum racemosum</i>	--
<b>Bacterium</b>	
<b>Bacterium family unknown</b>	
<i>Liberobacter africanum</i>	citrus greening bacterium
<i>Liberobacter asiaticum</i>	citrus greening bacterium
<i>Liberobacter</i> sp.	citrus greening bacterium
<i>Spiroplasma citri</i>	citrus stubborn
<b>Pseudomonadaceae</b>	
<i>Burkholderia cepacia</i>	sour skin
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	citrus canker
<i>Xanthomonas campestris</i> pv. <i>aurantifolii</i>	-
<i>Xanthomonas campestris</i> pv. <i>citrumelo</i>	citrus bacterial spot
<i>Xylella fastidiosa</i>	Pierce's disease
<i>Xylella fastidiosa</i> pv. <i>citri</i>	variegated chlorosis of citrus
<b>Virus</b>	
Indian citrus mosaic badnavirus	-
citrus cachexia viroid	-
citrus chlorotic dwarf	-
citrus infectious variegation ilarvirus	-
citrus infectious variegation ilarvirus [crinkly leaf strain]	-
citrus leaf rugose ilarvirus	-
citrus leathery leaf virus	-

citrus leprosis rhabdovirus	-
citrus mosaic virus	-
citrus ringspot virus	-
citrus tatter leaf capillovirus	-
citrus tristeza closterovirus [strains not in New Zealand]	-
citrus variable viroid	-
citrus viroids (groups I-IV)	-
citrus yellow mosaic badnavirus	-
citrus yellow mottle virus	-
dwarfing factor viroid	-
navel orange infectious mottling virus	-
satsuma dwarf nepovirus	-
satsuma dwarf nepovirus [Natsudaikai dwarf strain]	-
xyloporosis viroid	-
yellow vein clearing of lemon	-

### **Phytoplasma**

<i>Candidatus</i> Phytoplasma aurantifolia	witches' broom phytoplasma
rubbery wood	-

### **Disease of unknown aetiology**

Australian citrus dieback	-
blind pocket	-
bud union disease	-
citrus blight disease	-
citrus fatal yellows	-
citrus impietratura disease	-
citrus sunken vein disease	-
concave gum	-
crisacortis	-
gum pocket	-
gummy bark	-
kassala disease	-
lemon sieve tube necrosis	-
shell bark of lemons	-
zonate chlorosis	-

## Inspection, Testing and Treatment Requirements for *Fortunella*\*

ORGANISM TYPES	MAF ACCEPTABLE METHODS
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions).
<b>Mites</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions).
<b>Fungus</b>	Country freedom OR growing season inspection for symptom expression.
<b>Bacterium</b>	
<i>Burkholderia cepacia</i>	Growing season inspection for symptom expression.
<i>Liberobacter africanum</i>	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.
<i>Liberobacter asiaticum</i>	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.
<i>Spiroplasma citri</i>	Country freedom/shoot tip grafting. Graft inoculated sweet orange, 27 to 32°C. Bioassay = culture petiole new flush tissue. Collect tissue after several days at hot temperature (> 30°C) and incubate cultures at 32°C.
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xanthomonas campestris</i> pv. <i>aurantifolii</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xanthomonas campestris</i> pv. <i>citrumelo</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xylella fastidiosa</i>	Country freedom/shoot tip grafting bioassay/ PCR/ELISA OR suitable citrus indicator.
<i>Xylella fastidiosa</i> pv. <i>citri</i>	Country freedom/shoot tip grafting bioassay PCR/ELISA OR suitable citrus indicator.
<b>Virus</b>	
citrus chlorotic dwarf	Country freedom OR graft inoculated rough lemon at cool temperatures 18 to 25°C.
citrus infectious variegation ilarvirus	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow indicators at cool temperatures 18 to 25°C.
citrus infectious variegation ilarvirus [crinkly leaf strain]	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow indicators at cool temperatures 18 to 25°C.
citrus leaf rugose ilarvirus	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators at cool temperatures 18 to 25°C.
citrus leathery leaf virus	Country freedom OR Rangpur lime. Grow indicators at cool temperatures 18 to 25°C.
citrus leprosis rhabdovirus	Country freedom OR graft inoculated sweet orange. Grow indicators at cool temperatures 18 to 25°C.
citrus mosaic virus	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.
citrus ringspot virus	Country freedom OR graft inoculated dweet tangor, sweet orange, mandarin (Parson's Special). Grow indicators at cool temperatures 18 to 25°C.
citrus tatter leaf capillovirus	Country freedom OR graft inoculated Rusk citrange, rough lemon, <i>Citrus excelsa</i> , citrange (Troyer). Grow indicators at cool temperatures 18 to 25°C.
citrus tristeza closterovirus [strains not in New Zealand]	Country freedom OR ELISA, graft inoculated Mexican lime, sour orange and <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
citrus yellow mosaic badnavirus	Country freedom OR graft inoculated sweet orange, sour orange and citron.
citrus yellow mottle virus	Country freedom OR other suitable test.
Indian citrus mosaic badnavirus	Country freedom OR graft inoculated sweet orange at hot temperature 27 to 32°C.
navel orange infectious mottling virus	Country freedom OR graft inoculated Satsums. Grow indicators at cool temperatures 18 to 25°C.

<b>ORGANISM TYPES</b>	<b>MAF ACCEPTABLE METHODS</b>
satsuma dwarf nepovirus	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.
satsuma dwarf nepovirus [Natsudaidai dwarf strain]	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.
yellow vein clearing of lemon	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators at cool temperatures 18 to 25°C.
<b>Viroid</b>	
citrus cachexia viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
citrus variable viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
citrus viroids (groups I-IV)	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
dwarfing factor viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
xyloporosis viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract or mandarin (Parson's Special). Grow Citron at hot temperature 27 to 32°C.
<b>Disease of unknown aetiology</b>	
Australian citrus dieback	Country freedom OR other suitable test
blind pocket	Country freedom OR graft inoculated dweet tangor, sweet orange or Citrus excelsa. Grow indicators at cool temperatures 18 to 25°C.
bud union disease	Country freedom OR other suitable test
citrus blight disease	None (cuttings collected from blight free area). Inspect source tree after 2 years before releasing from quarantine.
citrus fatal yellows	Country freedom OR graft inoculated Citrus macrophylla.
citrus impietratura disease	Country freedom OR graft inoculated dweet tangor or sweet orange. Growth indicators at cool temperatures 18 to 25°C.
citrus sunken vein disease	Country freedom OR other suitable test.
concave gum	Country freedom OR graft inoculated dweet tangor, sweet orange or Citrus excelsa. Grow indicators at cool temperatures 18 to 25°C.
crisacortis	Country freedom OR graft inoculated dweet tangor, sweet orange or Citrus excelsa. Grow indicators at cool temperatures 18 to 25°C.
gum pocket	Country freedom OR graft inoculated dweet tangor, sweet orange or Citrus excelsa. Grow indicators at cool temperatures 18 to 25°C.
Gummy bark	Country freedom OR SPAGE of graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
Kassala disease	Country freedom, cuttings collected from kassala free area.
lemon sieve tube necrosis	Country freedom OR other suitable test.
shell bark of lemons	Country freedom OR other suitable test.
zonate chlorosis	Country freedom, cuttings collected from kassala free area.
<b>Phytoplasma</b>	
<i>Candidatus</i> phytoplasma aurantifolia	Country freedom OR graft inoculated lime. Grow indicators at cool temperatures 18 to 25°C.
rubbery wood	Country freedom OR graft inoculated sweet orange or lemon. Grow citron at hot temperature 27 to 32°C.

\* Country freedom is accepted as equivalence to a treatment.

### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. With prior notification, MAF will accept other internationally recognised testing methods.

## *Fragaria*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Fragaria*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **1. Type of *Fragaria* nursery stock approved for entry into New Zealand**

Cuttings (runner tips and stem cuttings only); Plants in tissue culture

*Fragaria* can be imported into Level 2 post entry quarantine from MAF-accredited facilities, or into Level 3 post entry quarantine from non-accredited facilities.

### **2. Pests of *Fragaria***

Refer to the pest list.

### **3. Entry conditions for:**

#### **3.1 *Fragaria* cuttings and tissue culture from offshore MAF-accredited facilities in any country**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Fragaria*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Fragaria*.

#### **(i) Documentation**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Fragaria* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

#### **(ii) Phytosanitary requirements**

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Fragaria* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section and by providing the following additional declarations to the phytosanitary certificate:

"The *Fragaria* cuttings / plants in tissue culture [choose ONE option] have been:

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification."

(iv) Post-entry quarantine

**PEQ:** All *Fragaria* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** Upon arrival cuttings will be dipped in 1% sodium hypochlorite for 2 minutes [cuttings only]. The nursery stock will be grown for a minimum period of 6 months in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. These periods are indicative minimum quarantine periods and may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.2 *Fragaria* cuttings and tissue culture from non-accredited facilities in any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Fragaria* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Fragaria* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section. No additional declarations are required.

(iv) Post-entry quarantine

**PEQ:** All *Fragaria* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** Upon arrival cuttings will be dipped in 1% sodium hypochlorite for 2 minutes [cuttings only]. The nursery stock will be grown for a minimum period of 16 months in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. Sixteen months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

## Pest List for *Fragaria*

### REGULATED PESTS (actionable)

#### Insect

#### Insecta

##### Coleoptera

##### Attelabidae

*Rhynchites germanicus*

strawberry rhynchites

##### Bruchidae

*Zabrotes arenarius*

strawberry weevil

##### Cantharidae

*Chauliognathus lugubris*

soldier beetle

##### Carabidae

*Calathus fuscipes*

ground beetle

*Harpalus affinis*

strawberry seed beetle

*Harpalus rufipes*

strawberry seed beetle

*Nebria brevicollis*

common black ground beetle

*Pterostichus cupreus*

strawberry ground beetle

*Pterostichus madidus*

strawberry ground beetle

*Pterostichus melanarius*

strawberry ground beetle

##### Chrysomelidae

*Altica caerulescens*

leaf beetle

*Chaetocnema concinna*

leaf feeding beetle

*Colaspis flavida*

grape colaspis

*Galeruca tanacetii*

strawberry leaf beetle

*Galerucella griseascens*

strawberry leaf beetle

*Galerucella tenella*

strawberry leaf beetle

*Haltica corrusca*

flea beetle

*Haltica pagana*

flea beetle

*Paria fragariae*

strawberry rootworm

*Systema frontalis*

flea beetle

##### Curculionidae

*Anthonomus rubi*

strawberry blossom weevil

*Anthonomus signatus*

strawberry bud weevil

*Apirocalus spp.*

weevils

*Barypeithes pellucidus*

strawberry weevil

*Cleonus kirbyi*

radish weevil

*Conotrachelus nenuphar*

plum weevil

*Donus salviae*

strawberry weevil

*Dyslobus decoratus*

decorated strawberry root weevil

*Dyslobus ursinus*

western strawberry root weevil

*Dyslobus wilcoxi*

Lacomb strawberry root weevil

*Geoderces spp.*

root weevil

*Haplidia etrusca*

root weevil

*Hypera brunneipennis*

Egyptian alfalfa weevil

*Myllocerus undecimpustulatus*

grey weevil

*Nemocestes fragariae*

strawberry root weevil

*Nemocestes incomptus*

woods weevil

*Nemocestes longulus*

strawberry root weevil

*Nemocestes sordidus*

strawberry root weevil

*Orthorhinus aethops*

weevil

*Otiorhynchus armatus*

strawberry root weevil

*Otiorhynchus clavipes*

red-legged weevil

*Otiorhynchus cribricollis*

cribrate weevil

*Otiorhynchus meridionalis*

strawberry root weevil

*Otiorhynchus rotundatus*

strawberry root weevil

*Otiorhynchus rugifrons*

strawberry root weevil

<i>Otiorhynchus singularis</i>	strawberry root weevil
<i>Panscopus torpidus</i>	root weevil
<i>Peritelopsis globiventris</i>	grey weevil
<i>Plinthodes taeniatus</i>	root weevil
<i>Polydrusus cervinus</i>	weevil
<i>Polydrusus sericeus</i>	green leaf weevil
<i>Rhadinosomus lacordairei</i>	thin strawberry weevil
<i>Rhinaria perdix</i>	strawberry weevil
<i>Rhynchites germanicus</i>	strawberry rhynchites
<i>Sciaphilus asperatus</i>	strawberry root weevil
<i>Sciopithes obscurus</i>	obscure root weevil
<i>Sitona hispidulus</i>	root weevil
<i>Strophomorphus porcellus</i>	weevil
<i>Thricolepis inornata</i>	root weevil
<i>Trigonoscuta pilosa</i>	root weevil
<i>Tyloderma fragariae</i>	strawberry crown borer
<b>Elateridae</b>	
Agriotes spp. (species not in New Zealand)	click beetles
<b>Nitidulidae</b>	
<i>Carpophilus fumatus</i>	sap beetle
<i>Glischrochilus hortensis</i>	sap beetle
<i>Lobiopa insularis</i>	strawberry borer
<i>Stelidota</i> spp.	sap beetles
<i>Stelidota geminata</i>	strawberry sap beetle
<b>Scarabaeidae</b>	
<i>Anoplognathus porosus</i>	Christmas beetle
<i>Cetonia</i> spp.	chafers
<i>Cyclocephala borealis</i>	northern masked chafer
<i>Hoplia</i> spp.	white grubs
<i>Lepidiota frenchi</i>	French's cane grub
<i>Melolontha melolontha</i>	cockchafer
<i>Metanastes vulgivagus</i>	black beetle
<i>Phyllopertha horticola</i>	garden chafer
<i>Phyllophaga decimlineata</i>	ten-lined June beetle
<i>Phyllophaga perversa</i>	western ten-lined June beetle
<i>Popillia japonica</i>	Japanese beetle
<i>Repsimus aeneus</i>	white grub
<i>Rhopaea magnicornis</i>	large pasture scarab
<i>Serica</i> spp.	white grubs
<i>Sericesthis geminata</i>	priunose scarab
<i>Sericesthis nigrolineata</i>	dusky pasture scarab
<b>Scolytidae</b>	
<i>Poecilips cardamomi</i>	bark beetle
<b>Silphidae</b>	
<i>Heterosilpha aenescens</i>	carrion beetle
<b>Collembola</b>	
<b>Sminthuridae</b>	
<i>Bourletiella arvalis dorsobscura</i>	garden springtail
<i>Sminthurus multidentatus</i>	garden springtail
<b>Diptera</b>	
<b>Agromyzidae</b>	
<i>Agromyza fragariae</i>	strawberry leafminer
<i>Agromyza spiraeae</i>	rose leafminer
<b>Tipulidae</b>	
<i>Tipula</i> spp	leatherjackets
<b>Hemiptera</b>	
<b>Anthocoridae</b>	
<i>Orius laevigatus</i>	plant bug
<b>Lygaeidae</b>	

<i>Euander lacertosus</i>	lygaeid bug
<i>Nysius clevelandensis</i>	grey cluster bug
<i>Nysius spp.</i>	bugs
<i>Nysius vinitor</i>	Rutherglen bug
<b>Miridae</b>	
<i>Calocoris hobartensis</i>	capsid
<i>Lygocoris pabulinus</i>	common green capsid
<i>Lygus elisus</i>	pale legume bug
<i>Lygus hesperus</i>	tarnished plant bug
<i>Lygus lineolaris</i>	tarnished plant bug
<i>Lygus rugulipennis</i>	tarnished plant bug
<i>Plagiognathus arbustorum</i>	stink bug
<i>Plagiognathus chrysanthemi</i>	stink bug
<i>Scolopostethus spp.</i>	plant bugs
<b>Pentatomidae</b>	
<i>Acrosternum hilare</i>	green stink bug
<i>Dolycoris baccarum</i>	stink bug
<b>Pyrrhocoridae</b>	
<i>Dindymus versicolor</i>	harlequin bug
<b>Homoptera</b>	
<b>Aleyrodidae</b>	
<i>Aleyrodes lonicerae</i>	strawberry whitefly
<i>Trialeurodes fernaldi</i>	whitefly
<i>Trialeurodes packardi</i>	strawberry whitefly
<i>Trialeurodes ruborum</i>	whitefly
<b>Aphididae</b>	
<i>Acyrtosiphon malvae rogersii</i>	strawberry aphid
<i>Amphorophora agathonica</i>	strawberry aphid
<i>Aphis fabae</i>	bean aphid
<i>Aphis forbesi</i>	strawberry root aphid
<i>Aphis gossypii</i> [vector]	cotton aphid
<i>Aphis rubifolii</i>	raspberry aphid
<i>Aulacorthum solani</i> [vector]	foxglove aphid
<i>Chaetosiphon jacobi</i>	strawberry aphid
<i>Chaetosiphon minus</i>	lesser strawberry aphid
<i>Chaetosiphon tetrarhodum</i> [vector]	strawberry aphid
<i>Chaetosiphon thomasi</i>	strawberry aphid
<i>Fimbriaphis fimbriata</i>	rose aphid
<i>Fimbriaphis wakibae</i>	rose aphid
<i>Macrosiphum pelargonii</i>	rose aphid
<i>Macrosiphum rosae</i> [vector]	rose aphid
<i>Myzaphis rosarum</i> [vector]	lesser rose aphid
<i>Myzus ascalonicus</i> [vector]	shallot aphid
<i>Myzus ornatus</i> [vector]	ornate aphid
<i>Myzus persicae</i> [vector]	green peach aphid
<i>Rhodobium porosum</i>	aphid
<b>Aphrophoridae</b>	
<i>Aphrophora alni</i>	spittlebug
<i>Aphrophora permutata</i>	rhubarb spittlebug
<b>Cercopidae</b>	
<i>Cercopis vulnerata</i>	red and black froghopper
<i>Emelyanoviana mollicula</i>	spittlebug
<i>Evacanthus interruptus</i>	spittlebug
<i>Philaenus leucophthalmus</i>	spittlebug
<b>Cicadellidae</b>	
<i>Aphrodes bicinctus</i>	strawberry leafhopper
<i>Apogonalia grossa</i>	leafhopper
<i>Coelidia olitoria</i>	leafhopper
<i>Edwardsiana spp.</i>	leafhoppers

<i>Empoasca fabae</i>	potato leafhopper
<i>Erythroneura elegantula</i>	western grape leafhopper
<i>Euscelis spp.</i>	leafhoppers
<i>Macrostelus spp.</i>	leafhoppers
<i>Scaphytopius acutus</i>	leafhopper
<i>Zygina schneideri</i>	leafhopper
<b>Pseudococcidae</b>	
<i>Chorizococcus arecae</i>	mealybug
<i>Dysmicoccus brevipes</i>	pineapple mealybug
<i>Planococcus citri</i>	citrus mealybug
<i>Rhizoecus kondonis</i>	Kondo mealybug
<b>Hymenoptera</b>	
<b>Tenthredinidae</b>	
<i>Allantus calceatus</i>	sawfly
<i>Allantus cinctus</i>	curled rose sawfly
<i>Cladius pectinicornis</i>	antler sawfly
<b>Lepidoptera</b>	
<b>Gelechiidae</b>	
<i>Aristotelia fragariae</i>	strawberry crown miner
<i>Compsolechia fragariella</i>	western strawberry leafroller
<b>Geometridae</b>	
<i>Ascotis selenaria</i>	mugwort looper
<b>Hepialidae</b>	
<i>Hepialus lupulinus</i>	swift moth
<b>Noctuidae</b>	
<i>Agrotis spp.</i> (species not in New Zealand)	cutworms
<i>Agrotis munda</i>	brown cutworm
<i>Agrotis segetum</i>	turnip moth
<i>Amphipoea interoceanica</i>	strawberry cutworm
<i>Helicoverpa punctigera</i>	oriental tobacco budworm
<i>Helicoverpa zea</i>	bollworm
<i>Hydraecia interoceanica</i>	noctuid moth
<i>Noctua pronuba</i>	large yellow underwing
<i>Orthosia hibisci</i>	speckled green fruitworm
<i>Peridroma saucia</i>	pearly underwing moth
<i>Phlogophora meticulosa</i>	angleshades moth
<i>Spodoptera exigua</i>	lesser armyworm
<i>Spodoptera sunia</i>	cluster caterpillar
<i>Xestia c-nigrum</i>	spotted cutworm
<b>Psychidae</b>	
<i>Hyalarcta huebneri</i>	leaf case moth
<b>Pyralidae</b>	
<i>Loxostege spp.</i>	pyralid moths
<i>Udea rubigalis</i>	celery leaftier
<b>Sesiidae</b>	
<i>Synanthedon bibionipennis</i>	strawberry crown moth
<b>Tortricidae</b>	
<i>Acleris comariana</i>	strawberry tortrix moth
<i>Ancylis comptana</i>	strawberry leafroller
<i>Ancylis fragariae</i>	strawberry leafroller
<i>Argyrotaenia citrana</i>	orange tortrix
<i>Cacoecimorpha pronubana</i>	carnation leafroller
<i>Choristoneura lafauryana</i>	strawberry leafroller
<i>Choristoneura rosaceana</i>	oblique-banded leafroller
<i>Claremontia confusa</i>	leafroller
<i>Clepsis busckana</i>	cyclamen leafroller
<i>Clepsis spectrana</i>	straw coloured tortrix
<i>Cnephasia asseclana</i>	leafroller
<i>Cnephasia longana</i>	omnivorous leaftier

<i>Cnephasia stephensiana</i>	leaf tier
<i>Compsolechia fragariella</i>	western strawberry leafroller
<i>Cryptoptila immersana</i>	ivy leafroller
<i>Epiphyas</i> spp.	leafrollers
<i>Lozotaenia forsterana</i>	leafroller
<i>Olethreutes lacunana</i>	fruit tree tortrix
<i>Olethreutes olivaceana</i>	fruit tree tortrix
<i>Pandemis dumetana</i>	fruit tree tortrix
<i>Platynota stultana</i>	omnivorous leafroller
<i>Ptycholoma peritana</i>	garden tortrix
<i>Sparganothis sulfureana</i>	blueberry leafroller
<b>Orthoptera</b>	
<b>Acrididae</b>	
<i>Phaulacridium vittatum</i>	wingless grasshopper
<b>Gryllotalpidae</b>	
<i>Gryllotalpa africana</i>	African mole cricket
<i>Gryllotalpa gryllotalpa</i>	mole cricket
<i>Scapteriscus acletus</i>	southern mole cricket
<i>Scapteriscus vicinus</i>	tawny mole cricket
<b>Pyrgomorphidae</b>	
<i>Atractomorpha crenaticeps</i>	grasshopper
<b>Thysanoptera</b>	
<b>Thripidae</b>	
<i>Scirtothrips dorsalis</i>	chilli thrips
<i>Scolothrips sexmaculatus</i>	
<i>Thrips atratus</i>	carnation thrips
<i>Thrips major</i>	rose thrips
<b>Mites</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Diptilomiopidae</b>	
<i>Diptacus fragarifoliae</i>	false spider mite
<b>Tetranychidae</b>	
<i>Tetranychus kanzawai</i>	kanzawaii mite
<i>Tetranychus lobustus</i>	strawberry spider mite
<i>Tetranychus neocalendonicus</i>	Mexican spider mite
<i>Tetranychus pacificus</i>	Pacific spider mite
<b>Nematodes</b>	
<b>Adenophorea</b>	
<b>Dorylaimida</b>	
<b>Longidoridae</b>	
<i>Longidorus elongatus</i> [vector]	-
<i>Longidorus sylphus</i>	needle nematode
<i>Paralongidorus maximus</i>	needle nematode
<i>Xiphinema americanum</i> [Vector]	dagger nematode
<i>Xiphinema chambersi</i>	dagger nematode
<i>Xiphinema diversicaudatum</i> [vector]	dagger nematode
<b>Secernentea</b>	
<b>Tylenchida</b>	
<b>Aphelenchoididae</b>	
<i>Aphelenchoides besseyi</i>	rice white-tip nematode
<b>Belonolaimidae</b>	
<i>Belonolaimus gracilis</i>	sting nematode
<b>Criconematidae</b>	
<i>Criconemoides curvatum</i>	ring nematode
<i>Criconemoides lobatum</i>	ring nematode
<b>Dolichodoridae</b>	

<i>Tylenchorhynchus claytoni</i>	tobacco stunt nematode
<b>Heteroderidae</b>	
<i>Heterodera</i> spp.	cyst nematode
<b>Hoplolaimidae</b>	
<i>Hoplolaimus</i> spp.	crown-headed lance nematode
<i>Helicotylenchus microlobus</i>	spiral nematode
<i>Rotylenchulus buxophilus</i>	reniform nematode
<i>Rotylenchulus goodeyi</i>	reniform nematode
<i>Scutellonema brachyurus</i>	spiral nematode
<b>Paratylenchidae</b>	
<i>Paratylenchus macrophallus</i>	pin nematode
<b>Pratylenchidae</b>	
<i>Pratylenchus brachyurus</i>	root lesion nematode
<i>Pratylenchus coffeae</i>	coffee root lesion nematode
<i>Pratylenchus loosi</i>	root lesion nematode
<i>Pratylenchus scribneri</i>	Scribner's root lesion nematode
<i>Pratylenchus zea</i>	corn root lesion nematode
<i>Radopholus similis</i>	burrowing nematode
<b>Myriapod</b>	
<b>Diplopoda</b>	
<b>Polydesmida</b>	
<b>Xystodesmidae</b>	
<i>Pleuroloma flavipes</i>	millipede
<b>Molluscs</b>	
<b>Gastropoda</b>	
<b>Stylommatophora</b>	
<b>Helicidae</b>	
<i>Trichia striolata</i>	strawberry snail
<b>Fungi</b>	
<b>Ascomycota</b>	
<b>Dothideales</b>	
<b>Mycosphaerellaceae</b>	
<i>Mycosphaerella louisianae</i>	purple leaf spot
<b>Eurotiales</b>	
<b>Trichocomaceae</b>	
<i>Byssosclamyces fulva</i>	byssosclamyces rot
<b>Hypocreales</b>	
<b>Hypocreaceae</b>	
<i>Schizoparme straminea</i> (anamorph <i>Coniella castaneicola</i> )	schizoparme fruit rot
<b>Leotiales</b>	
<b>Leotiaceae</b>	
<i>Discoghainesia oenotherae</i> (anamorph <i>Hainesia lythri</i> )	leaf spot
<b>Basidiomycota: Basidiomycetes</b>	
<b>Agaricales</b>	
<b>Tricholomataceae</b>	
<i>Armillaria bulbosa</i>	armillaria root rot
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	armillaria root rot
<i>Armillaria tabescens</i>	armillaria root rot
<b>Ceratobasidiales</b>	
<b>Ceratobasidiaceae</b>	
<i>Ceratobasidium anceps</i> (anamorph <i>Sclerotium deciduum</i> )	leaf rot
<i>Rhizoctonia fragariae</i>	black root rot
<b>Chytridiomycota</b>	

<b>Chytridiales</b>	
<b>Olpidiaceae</b>	
<i>Olpidium brassicae</i> [vector]	Black root
<b>Basidiomycota: Teliomycetes</b>	
<b>Uredinales</b>	
<b>Pucciniaceae</b>	
<i>Phragmidium mexicana</i>	
<i>Phragmidium potentiallae</i>	leaf rust
<b>Chytridiomycota</b>	
<b>Chytridiales</b>	
<b>Synchytriaceae</b>	
<i>Synchytrium fragariae</i>	root gall
<b>Mitosporic Fungi (Agonomycetes)</b>	
<b>Agonomycetales</b>	
<b>Unknown Agonomycetales</b>	
<i>Rhizoctonia fragariae</i>	fruit and root rot
<b>Mitosporic Fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Leptostromataceae</b>	
<i>Kabatia fragariae</i>	leaf spot
<b>Sphaerioidaceae</b>	
<i>Coniella fragariae</i>	flower spot
<i>Phyllosticta fragaricola</i>	phyllosticta leaf spot
<i>Rhabdospora fragariae</i>	leaf spot
<i>Septoria fragariae</i>	septoria spot
<i>Septoria fragariaecola</i>	septoria spot
<i>Stagonospora fragariae</i>	stagonospora
<b>Unknown Coelomycetes</b>	
<b>Unknown Coelomycetes</b>	
<i>Colletotrichum</i> spp. (species not in New Zealand)	
<i>Glomerella cingulata</i> (anamorph <i>Colletotrichum gloeosporioides</i> )	strawberry anthracnose
<i>Marssonina canadensis</i>	leaf scorch
<i>Marssonina pakistanica</i>	leaf scorch
<i>Marssonina potentillae</i>	leaf scorch
<i>Pestalotia longisetula</i>	leaf spot
<i>Pilidiella quercola</i>	schizoparme fruit rot
<b>Mitosporic Fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	
<b>Dematiaceae</b>	
<i>Cercospora fragariae</i>	leaf spot
<i>Cercospora vexans</i>	cercospora leaf spot
<i>Idriella lunata</i>	root rot
<b>Moniliaceae</b>	
<i>Ramularia fragariae</i>	ramularia leaf spot
<i>Verticillium albo-atrum</i> [severe strain]	progressive wilt
<b>Tuberculariales</b>	
<b>Tuberculariaceae</b>	
<i>Fusarium oxysporum</i> f. sp. <i>fragariae</i>	stub wilt
<b>Oomycota</b>	
<b>Peronosporales</b>	
<b>Peronosporaceae</b>	
<i>Peronospora fragariae</i>	downy mildew
<b>Pythiales</b>	
<b>Pythiaceae</b>	
<i>Pythium debaryanum</i>	root rot
<i>Pythium dissotocum</i>	root rot
<i>Pythium hypogynum</i>	root rot
<i>Pythium perniciosum</i>	root and stem rot

<i>Pythium sylvaticum</i>	root rot
<b>Zygomycota: Zygomycetes</b>	
<b>Mucorales</b>	
<b>Mucoraceae</b>	
<i>Mucor recurvus</i>	mucor rot
<i>Rhizopus spp.</i>	
<b>Bacteria</b>	
-	
-	
<i>Ralstonia solanacearum</i> (Race 2)	moko disease
Strawberry marginal chlorosis [ <i>Candidatus</i> phlomobacter fragariae']	
Strawberry rickettsia yellows	
<i>Xanthomonas arboricola</i> pv. <i>fragariae</i>	bacterial leaf blight
<i>Xanthomonas fragariae</i>	angular leaf spot
<i>Xylella fastidiosa</i> * [ <i>Fragaria vesca</i> only]	Pierce's disease

### Viruses

-	
-	
-	
<i>Fragaria chiloensis</i> latent virus	-
Raspberry ringspot virus	-
Strawberry chlorotic fleck virus	-
Strawberry latent C virus	-
Strawberry latent ringspot virus [strains not in New Zealand]	
Strawberry mild yellow edge-associated virus	-
Strawberry pallidosis associated virus	-
Strawberry pseudo mild yellow edge virus	-
Strawberry vein banding virus	-
Tobacco necrosis virus [strains not in New Zealand]	-
Tobacco streak virus [strains not in New Zealand]	
Tomato black ring virus	-
Tomato bushy stunt virus	-
Tomato ringspot virus [strains not in New Zealand]	-

### Phytoplasmas

-	
-	
-	
Aster yellows phytoplasma	-
Clover phyllody phytoplasma	-
Clover proliferation phytoplasma	-
Clover yellow edge phytoplasma	-
Stolbur phytoplasma	-
STRAWB1 phytoplasma	-
STRAWB2 phytoplasma	
Strawberry green petal phytoplasma	-
Strawberry leafy fruit phytoplasma	
Strawberry multicipita phytoplasma	
Strawberry multiplier phytoplasma	-
Strawberry phylloid fruit phytoplasma	
Strawberry yellows phytoplasma	

### Diseases of unknown aetiology

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Strawberry feather leaf disease  
Strawberry lethal decline disease

- \* For organisms intercepted that are not listed within this pest list refer to the [Biosecurity Organisms Register for Imported Commodities](#) to determine regulatory status.

## Inspection, Testing and Treatment Requirements for *Fragaria*

ORGANISM TYPES	MAF-ACCEPTABLE METHODS
<b>Insects</b>	Visual inspection AND approved insecticide treatments as described in the <a href="#">basic conditions</a> of the Import Health Standard Nursery Stock from All countries [cuttings only]
<b>Mites</b>	Visual inspection AND approved miticide treatments as described in the <a href="#">basic conditions</a> of the Import Health Standard Nursery Stock from All countries. [cuttings only] or binocular microscope inspection in PEQ [plants <i>in vitro</i> only]
<b>Nematodes</b>	Growing season inspection in PEQ for symptoms of foliar nematodes
<b>Fungi</b>	Growing season inspection in PEQ for symptom expression
<b>Bacteria</b> (and diseases caused by bacteria-like organisms)	
<i>Ralstonia solanacearum</i> (Race 2)	Growing season inspection for symptom expression.
Strawberry marginal chlorosis (' <i>Candidatus phlomobacter fragariae</i> ')	Growing season inspection for symptom expression AND PCR
Strawberry rickettsia yellows	Growing season inspection for symptom expression
<i>Xanthomonas arboricola</i> pv. <i>fragariae</i>	Growing season inspection for symptom expression AND real-time PCR (Weller <i>et al.</i> , 2007)
<i>Xanthomonas fragariae</i>	Growing season inspection for symptom expression AND PCR (Pooler <i>et al.</i> , 1996) OR real-time PCR (Weller <i>et al.</i> , 2007)
<i>Xylella fastidiosa</i> ( <i>Fragaria vesca</i> only)	Growing season inspection in PEQ for disease symptom expression AND PCR (Minsavage <i>et al.</i> , 1994).
<b>Viruses</b>	
<i>Fragaria chiloensis</i> latent virus	Herbaceous indicators ( <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> )
Raspberry ringspot virus	Herbaceous indicator ( <i>Chenopodium quinoa</i> ) AND ELISA or PCR
Strawberry chlorotic fleck virus	Graft inoculation ( <i>Fragaria vesca</i> cl. EMB or EMK)
Strawberry latent C virus	Graft inoculation ( <i>Fragaria vesca</i> cl. EMC or UC5)
Strawberry latent ringspot virus [strains not in New Zealand]	Herbaceous indicators ( <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> ) AND ELISA or PCR
Strawberry mild yellow edge-associated virus	Graft inoculation (2 indicators; <i>Fragaria vesca</i> cl. UC4 or UC5, or cv. Alpine)
Strawberry pallidosis associated virus	Graft inoculation ( <i>Fragaria virginiana</i> cl. UC10 or UC11)
Strawberry pseudo mild yellow edge virus	Graft inoculation ( <i>Fragaria vesca</i> cl. UC4 or cv. Alpine. or <i>Fragaria virginiana</i> cl. UC12)
Strawberry vein banding virus	Graft inoculation ( <i>Fragaria vesca</i> cl. UC5 or UC6, or cv. Alpine. or <i>Fragaria virginiana</i> cl. UC12) AND PCR
Tobacco necrosis virus [strains not in New Zealand]	Herbaceous indicators ( <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> ) AND ELISA
Tobacco streak virus [strains not in New Zealand]	Herbaceous indicators ( <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> )
Tomato black ring virus	Herbaceous indicators ( <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> ) AND ELISA
Tomato bushy stunt virus	Herbaceous indicator ( <i>Chenopodium quinoa</i> )
Tomato ringspot virus [strains not in New Zealand]	Herbaceous indicators ( <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> ) AND ELISA or PCR
<b>Phytoplasmas</b>	Growing season inspection AND nested PCR using the universal phytoplasma primers P1/P7 (Deng & Hiruki, 1991; Schneider <i>et al.</i> , 1995) followed by R16F2/R16R2 (Lee <i>et al.</i> , 1995)
<b>Diseases of unknown aetiology</b>	
Strawberry feather leaf disease	Graft inoculation ( <i>Fragaria vesca</i> cl. UC1 or UC4, or cv. Alpine)
Strawberry lethal decline disease	Graft inoculation ( <i>Fragaria vesca</i> cv. Alpine)

### Notes:

1. Unit for testing is an individual tissue culture plantlet for plants *in vitro* or an individual cutting. Each single plantlet and cutting must be labeled individually and tested separately.
2. Plants *in vitro*: all tissue culture plantlets must go through a period of dormancy before virus testing to increase the virus titre. Plantlets must also be potted up and grown in a MAFBNZ approved greenhouse and only material from the greenhouse is to be selected for testing.
3. Virus testing is to be conducted on new spring growth.
4. Growing season is defined as an extended period of plant growth that includes environmental conditions equivalent to spring (longer wetter days and colder temperatures), summer (longer dryer days and warm temperatures), and autumn (shorter wetter days and warm but cooling temperatures).
5. Phytoplasma and bacteria testing is to be conducted at the end of the summer growth period. Plants must be sampled from at least two positions on the apical crown region.
6. Graft indexing hosts: Each *Fragaria* plant must be tested by leaf-grafting onto two replicate indicator cultivars. The indicator plants must be maintained in a vigorous state of growth before and after grafting. Grafted plants are to be inspected regularly for symptoms of disease for at least 3 months.
7. Herbaceous indicator hosts: *Chenopodium quinoa* and *Cucumis sativus*. Two plants of each herbaceous indicator species must be used in each test. Herbaceous indicator plants must be grown at 18-25°C before and after inoculation and must be shaded for 24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
8. Enzyme linked immunosorbent assay (ELISA) tests. All ELISA tests must be validated using both positive and negative controls prior to use in quarantine testing. Positive, negative, and buffer controls must be used in all tests.
9. Polymerase chain reaction (PCR) tests. All PCR tests must be validated using positive controls prior to use in quarantine testing. Positive and no template controls must be used in all tests. Positive internal control primers and a negative plant control should also be used in PCR tests.
10. Inspection of the *Fragaria* plants by the operator of the PEQ facility for signs of pest and disease must be at least twice per week during periods of active growth.
11. Other internationally recognised testing methods may be accepted by MAF with prior notification.

## References

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- Lee, I.M., Bertaccini, A., Vibio, M., Gundersen, D.E. 1995. Detection of multiple phytoplasmas in perennial fruit trees with decline symptoms in Italy. *Phytopathology* 85: 728-735.
- Minsavage, G.V., Thompson, C.M., Hopkins, D.L., et al. 1994. Development of a polymerase chain reaction protocol for detection of *Xylella fastidiosa* in plant tissue. *Phytopathology* 84: 456-461.
- Pooler, M.R., Ritchie, D.F., Hartung, J.S. 1996. Genetic relationships among strains of *Xanthomonas fragariae* based on random amplified polymorphic DNA PCR, repetitive extragenic palindromic PCR, and Enterobacterial repetitive intergenic consensus PCR data and generation of multiplexed PCR primers useful for the identification of this phytopathogen. *Applied and Environmental Microbiology* 62: 3121-3127.

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- Weller, S.A., Beresford-Jones, N.J., Hall, J., Thwaites, R., Parkinson, N., Elphinstone, J.G. 2007. Detection of *Xanthomonas fragariae* and presumptive detection of *Xanthomonas arboricola* pv. *fragariae*, from strawberry leaves, by real-time PCR. *Journal of Microbiological Methods* 70: 379-383.

## *Freesia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Freesia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Virus diseases

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

#### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

#### **Additional Declaration(s):**

##### **1) For bulbs produced under a MAF-approved Dutch bulb propagation scheme:**

"In addition to inspection of the dormant bulbs prior to shipment, the imported bulbs meet the requirements of the NAKtuinbouw Elite (Class SEE or EE) or Select (Class A or E) [choose one] bulb certification scheme."

**OR**

##### **2) For bulbs NOT produced under a MAF-approved bulb propagation scheme:**

"In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests."

#### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

## *Fuchsia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Fuchsia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Aculops fuchsiae* (Fuchsia Gall Mite)

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants or Cuttings:**

**PEQ:** Level 2  
**Minimum Period:** 3 months

#### **Additional Declarations:**

"*Aculops fuchsiae* is not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

**OR**

"The plants have been dipped in Carbaryl at the rate of 0.5g a.i. per litre of water".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Gaultheria*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Gaultheria*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Chrysomyxa ledi*, *Microsphaeria* spp, *Phytophthora ramorum*.

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. **Additional Declarations:** "*Chrysomyxa ledi* and *Microsphaeria* spp. are not known to occur in \_\_\_\_\_ (the country or state of where the plants were grown) \_\_\_\_\_".

**OR**

"The plants were inspected during the growing season and no *Chrysomyxa ledi* or *Microsphaeria* spp. was detected".

- b. "The plants have been dipped prior to export in propiconazole at the rate of 0.5g a.i. per litre of water."  
c. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Gentiana*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Gentiana*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Japan

**Quarantine Pests:** *Cronartium flaccidum*; *Tetranychus kanzawai*

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2  
**Minimum Period:** 3 months

#### **Additional Declarations:**

1. "The plants have been dipped in oxycarboxin at 1.5g a.i. per litre of water, prior to export".
2. "The plants have been dipped prior to export in dicofol at the rate of 0.7g a.i. per litre.

#### **B. For Tissue Cultures:**

As for Standard Entry Conditions for Tissue Cultures - see Section 2.2.2.

## *Gerbera*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Gerbera*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Frankliniella occidentalis*; *Liriomyza* spp.

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

"The plants have been inspected in accordance with appropriate official procedures and found to be free of *Frankliniella occidentalis* and *Liriomyza* spp."

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Gladiolus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Gladiolus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Puccinia gladioli*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

#### **Additional Declarations:**

"*Puccinia gladioli* is not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

**OR**

"The plants were inspected during the growing season and *Puccinia gladioli* was not detected".

**B. For Dormant Bulbs (Corms) from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

#### **OPTION 1:**

**No import permit is required.**

**PEQ:** None

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

#### **Additional Declaration(s):**

##### **1) For bulbs produced under a MAF-approved Dutch bulb propagation scheme:**

"In addition to inspection of the dormant bulbs prior to shipment, the imported bulbs meet the requirements of the BKD Class 1 or ALG [choose one] bulb certification scheme."

**OR**

##### **2) For bulbs NOT produced under a MAF-approved bulb propagation scheme:**

"In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests."

#### **OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Glycyrrhiza*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Glycyrrhiza*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests** *Uromyces* spp.

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

"*Uromyces* spp. are not known to occur on *Glycyrrhiza* in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

**OR**

"The plants were inspected during the growing season and no *Uromyces* spp. were detected".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Guzmania*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Guzmania*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** Basic; with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Helianthus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Helianthus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Alternaria helianthi*; *Septoria helianthi*; *Phymatotrichopsis omnivora*; *Plasmopara halstedii*; *Pseudomonas* spp.; Uredinales

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

**For Dormant Tubers Only:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs have been sourced from a “Pest free area”, free from *Phymatotrichopsis omnivora*".

**OR**

(i) "The dormant bulbs have been sourced from a “Pest free place of production”, free from *Phymatotrichopsis omnivora*".

**AND**

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 “Pesticide treatments for dormant bulbs”. If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate.

## *Hippeastrum*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Hippeastrum*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **1. Type of *Hippeastrum* nursery stock approved for entry into New Zealand**

Dormant bulbs

Plants in tissue culture

### **2. Pests of *Hippeastrum***

Refer to the pest list.

### **3. Entry conditions for:**

#### **3.1 *Hippeastrum* dormant bulbs from any country**

##### (i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

##### (ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Hippeastrum* dormant bulbs have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi OR treated for regulated nematodes and fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses.

AND

- treated for regulated mites as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification

##### (iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section, and by providing the following additional declaration to the phytosanitary certificate:

"The *Hippeastrum* dormant bulbs in this consignment have been:

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated nematodes and fungi [if applicable].

AND

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated bacteria, phytoplasmas and viruses."

(iv) Post-entry quarantine

**PEQ:** Level 1

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.2 *Hippeastrum* dormant bulbs from the Netherlands

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Hippeastrum* dormant bulbs have been:

- produced in accordance with the requirements of the BKD ALG bulb certification scheme and inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pest.

AND

- The bulbs are free from *Armillaria mellea* and *Pratylenchus scribneri*.

AND

- Sourced from a pest free production site for *hippeastrum* free from regulated nematodes, viruses and fungi and held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declaration to the phytosanitary certificate:

- "The *Hippeastrum* dormant bulbs have been produced in accordance with the requirements of the BKD ALG bulb certification scheme and inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pest.

AND

- The bulbs are free from *Armillaria mellea* and *Pratylenchus scribneri*.

AND

- Sourced from a pest free production site for hippeastrum free from regulated nematodes, viruses and fungi and held in a manner to ensure that infestation/reinfestation does not occur following certification.”

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed.

### 3.3 *Hippeastrum* plants in tissue culture from any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Hippeastrum* plants in tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from parent stock inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declaration to the phytosanitary certificate:

"The *Hippeastrum* plants in tissue culture have been derived from parent stock:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed overseas. Alternatively the inspection and testing may be completed in post-entry quarantine upon arrival in New Zealand according to the following conditions:

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required

## Pest List for *Hippeastrum*

### REGULATED PESTS (actionable)

#### Mite

#### Arachnida

#### Acarina

#### Tarsonemidae

*Steneotarsonemus laticeps*

bulb scale mite

#### Nematode

#### Secernentea

#### Tylenchida

#### Pratylenchidae

*Pratylenchus coffeae*

coffee root lesion nematode

*Pratylenchus scribneri*

Scribner's root lesion nematode

#### Fungus

#### Basidiomycota: Basidiomycetes

#### Agaricales

#### Tricholomataceae

*Armillaria mellea* (anamorph *Rhizomorpha subcorticalis*)

armillaria root rot

#### Virus

*Hippeastrum mosaic virus*

-

## *Humulus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Humulus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Pseudoperonospora humuli*; *Tetranychus kanzawai*; *Verticillium albo-atrum*

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

### **For Whole Plants and Tissue Culture:**

**PEQ:** Level 3

**Minimum Period:** 3 months

## *Hydrangea*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Hydrangea*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Tetranychus kanzawai*; *Xylella fastidiosa*

### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

1. Additional declaration: "The plants have been dipped prior to export in dicofol at the rate of 0.7g a.i. per litre of water".
2. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

#### **B. For Plants in Tissue Culture from All Countries:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Ipomoea batatas*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Ipomoea batatas*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine pests:** *Helicobasidium mompa*; *Streptomyces ipomoea*; virus diseases; *Xylella fastidiosa*.

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

#### **B. For Tissue Cultures:**

**PEQ:** Level 3

**Minimum Period:** 3 months

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Iris*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **1. Type of *Iris* nursery stock approved for entry into New Zealand**

Whole plants

Dormant bulbs

Plants in tissue culture

### **2. Pests of *Iris***

Refer to the pest list.

### **3. Entry conditions for:**

#### **3.1 *Iris* whole plants and dormant bulbs from any country**

##### *(i) Documentation*

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

##### *(ii) Phytosanitary requirements*

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Iris* dormant bulbs or whole plants have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi OR treated for regulated nematodes and fungi as described in section or section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 [whole plants] or section 2.2.1.7 [dormant bulbs] of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

##### *(iii) Additional declarations to the phytosanitary certificate*

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or

Disinfection Treatment” section, and by providing the following additional declaration to the phytosanitary certificate:

"The *Iris* dormant bulbs or whole plants [choose one] in this consignment have been:

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi [if applicable].

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses."

(iv) Post-entry quarantine

### **Whole plants and dormant bulbs**

**PEQ:** Level 1

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required. Cut flowers may receive biosecurity clearance while the imported plants remain in post-entry quarantine following inspection of the parent plants and with prior approval from a MAF Inspector.

### **3.1 *Iris* whole plants and dormant bulbs from the Netherlands**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Iris* dormant bulbs or whole plants have been:

- produced in accordance with the requirements of the Bloembollenkeuringsdienst (BKD) Class 1 bulb certification scheme.

AND

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi OR treated for regulated nematodes and fungi as described in section or section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 [whole plants] or section 2.2.1.7 [dormant bulbs] of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section, and by providing the following additional declaration to the phytosanitary certificate:

"The *Iris* dormant bulbs or whole plants [choose one] in this consignment have been:

- produced in accordance with the requirements of the BKD Class 1 bulb certification scheme.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi [if applicable].

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses."

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed.

### 3.3 *Iris* plants in tissue culture from any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Iris* plants in tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from parent stock inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from parent stock tested using molecular/ serological methods [choose ONE option] and found free of *Tobacco rattle virus*.

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declaration to the phytosanitary certificate:

"The *Iris* plants in tissue culture have been derived from parent stock:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests

AND

- tested using molecular/ serological methods [choose ONE option] and found free of *Tobacco rattle virus*."

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed overseas. Alternatively the inspection and testing may be completed in post-entry quarantine upon arrival in New Zealand according to the following conditions:

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Iris*

## REGULATED PESTS (actionable)

### Insect

#### Insecta

##### Coleoptera

###### Scarabaeidae

*Popillia japonica* Japanese beetle

##### Homoptera

###### Pseudococcidae

*Aleyrodes spiraeoides* [whole plants only] -

###### Pseudococcidae

*Phenacoccus avenae* -

*Phenacoccus emansor* -

*Pseudococcus jackbeardsleyi* [whole plants only] Jack Beardsley mealybug

*Rhizoecus palestineae* root mealybug

##### Lepidoptera

###### Hepialidae

*Hepialus humuli* ghost swift moth

*Hepialus lupulinus* swift moth

###### Noctuidae

*Hydraecia micacea* potato stem borer

*Macronoctua onusta* iris borer

##### Thysanoptera

###### Thripidae

*Frankliniella iridis* iris thrips

### Mite

#### Arachnida

##### Acarina

###### Tarsonemidae

*Steneotarsonemus laticeps* bulb scale mite

### Nematode

#### Secernentea

##### Tylenchida

###### Criconematidae

*Hemicycliophora typica* sheath nematode

###### Dolichodoridae

*Tylenchorhynchus gaudialis* -

###### Hoplolaimidae

*Rotylenchus goodeyi* spiral nematode

###### Meloidogynidae

*Meloidogyne arenaria* peanut root knot nematode

*Meloidogyne ichinohei* -

### Fungus

#### Ascomycota

##### Dothideales

###### Leptosphaeriaceae

*Trematosphaeria heterospora* --

##### Leotiales

###### Sclerotiniaceae

*Botryotinia convoluta* (anamorph *Botrytis convallariae*) stem rot

*Botryotinia polyblastis* (anamorph *Botrytis polyblastis*) fire disease

*Sclerotinia bulborum* black slime

#### Basidiomycota: Basidiomycetes

<b>Agaricales</b>		
<b>Tricholomataceae</b>		
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )		armillaria root rot
<b>Lachnocladales</b>		
<b>Lachnocladiaceae</b>		
<i>Scytinostroma eurasiaticogalactinum</i>		white root rot
<b>Phallales</b>		
<b>Hysterangiaceae</b>		
<i>Hysterangium boudieri</i>		--
<b>mitosporic fungi (Agonomycetes)</b>		
<b>Agonomycetales</b>		
<b>unknown Agonomycetales</b>		
<i>Rhizoctonia tuliparum</i>		basal rot
<i>Sclerotium rolfsii</i> var. <i>delphinii</i>		sclerotium rot
<b>Bacterium</b>		
<b>Pseudomonadaceae</b>		
<i>Burkholderia gladioli</i> pv. <i>gladioli</i>		bacterial rot
<b>Virus</b>		
<i>Broad bean wilt virus</i>		-
<i>Iris fulva</i> mosaic virus		-
<i>Iris germanica</i> leaf stripe virus		-
<i>Japanese iris</i> necrotic ring virus		-
<i>Tobacco rattle virus</i> [strains not in New Zealand]		-

## *Juglans*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Juglans*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Erwinia quercina* pv. *rubrifaciens*; *Erwinia nigrifluens*; *Gnomonia leptostyla*; Walnut bunch/brooming disease; Walnut blackline; *Xylella fastidiosa*.

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 6 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

#### **B. For Tissue Culture:**

**PEQ:** Level 3

**Minimum Period:** 6 months

## *Juniperus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Juniperas*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Bursaphelenchus* spp.; *Lophodermium* spp.; Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 6 months

## *Kalmia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Kalmia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Chrysomyxa ledi*, *Microsphaeria* spp.; *Phytophthora ramorum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants from Australia (these commodities may not be imported from other countries):**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declarations:**

1. "*Chrysomyxa ledi* and *Microsphaeria* spp. are not known to occur in \_\_\_\_\_ (the country or state of where the plants were grown) \_\_\_\_\_".

#### **OR**

"The plants were inspected during the growing season and no *Chrysomyxa ledi* or *Microsphaeria* spp. was detected".

2. "The plants have been dipped prior to export in propiconazole at the rate of 0.5g a.i. per litre of water."

3. "The plants have been sourced from a “Pest free area”, free from *Phytophthora ramorum*".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Liatris*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom, USA.

**Quarantine Pests:** *Phymatotrichopsis omnivora*; Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Additional Declaration:**

"Rust diseases of genus *Coleosporium* and *Cronatium* are not known to occur on \_\_\_\_\_(the host species being imported)\_\_\_\_\_ in \_\_\_\_\_ (the country in which the plants were grown) \_\_\_\_\_".

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom:**

**OPTION 1:**

**No import permit is required.**

**PEQ:** None

**Additional Declaration(s):**

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

**OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from the USA:**

**No import permit is required unless the bulbs require post-entry quarantine.**

**PEQ:** None or Level 2 (see below)

**Additional Declaration(s):**

1. "In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests".

2. "The dormant tubers have been sourced from a “Pest free area”, free from *Phymatotrichopsis omnivora*".

**OR**

(i) "The dormant bulbs have been sourced from a "Pest free place of production", free from *Phymatotrichopsis omnivora*".

AND

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 "Pesticide treatments for dormant bulbs". If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the "Disinfestation and/or Disinfection Treatment" section of the phytosanitary certificate.

AND

(iii) Post-entry quarantine: Upon arrival in New Zealand the dormant bulbs will require a period of at least 3 months in Level 2 post-entry quarantine.

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Lilium*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Lilium* nursery stock approved for entry into New Zealand**

Dormant bulbs  
Plants in tissue culture

**2. Pests of *Lilium***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Lilium* dormant bulbs from any country**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Lilium* dormant bulbs have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi OR treated for regulated nematodes and fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses.

AND

- treated for regulated insects and mites as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section, and by providing the following additional declaration to the phytosanitary certificate:

"The *Lilium* dormant bulbs in this consignment have been:

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated nematodes and fungi [if applicable].

AND

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated bacteria and viruses."

(iv) *Post-entry quarantine*

**PEQ:** Level 1

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required. Cut flowers may receive biosecurity clearance while the imported plants remain in post-entry quarantine following inspection of the parent plants (including inspection for bulbils) and with prior approval from a MAF Inspector.

### 3.2 *Lilium* dormant bulbs from the Netherlands

(i) *Documentation*

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) *Phytosanitary requirements*

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Lilium* dormant bulbs have been:

- produced in accordance with the requirements of the Bloembollenkeuringsdienst (BKD) ALG bulb certification scheme.

AND

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated nematodes and fungi OR treated for regulated nematodes and fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated bacteria and viruses.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) *Additional declarations to the phytosanitary certificate*

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the "Disinfestation and/or

Disinfection Treatment” section, and by providing the following additional declaration to the phytosanitary certificate:

"The *Lilium* dormant bulbs in this consignment have been:

- produced in accordance with the requirements of the BKD Class ALG bulb certification scheme.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi [if applicable].

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses."

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed.

### 3.3 *Lilium* plants in tissue culture from any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Lilium* plants in tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from parent stock inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from parent stock tested using molecular/ serological methods [choose ONE option] and found free of *Apple stem grooving virus* and *Tobacco rattle virus*.

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declaration to the phytosanitary certificate:

"The *Lilium* plants in tissue culture have been derived from parent stock:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests

AND

- tested using molecular/ serological methods [choose ONE option] and found free of *Apple stem grooving virus* and *Tobacco rattle virus*."

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed overseas. Alternatively the inspection and testing may be completed in post-entry quarantine upon arrival in New Zealand according to the following conditions:

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

## Pest List for *Lilium*

### REGULATED PESTS (actionable)

#### Insect

##### Insecta

##### Collembola

##### Entomobryidae

*Entomobrya multifasciata*

Springtail

##### Lepidoptera

##### Yponomeutidae

*Acrolepiopsis lilivora*

-

#### Mite

##### Arachnida

##### Acarina

##### Acaridae

*Schwiebea cuncta*

-

*Schwiebea taiwanensis*

-

##### Tenuipalpidae

*Brevipalpus lilium*

false spider mite

#### Nematode

##### Adenophorea

##### Dorylaimida

##### Longidoridae

*Xiphinema insigne*

dagger nematode

##### Trichodoridae

*Paratrichodorus* spp. (except *P. lobatus*, *P. minor*, *P. pachydermus*, *P. porosus*)

-

*Trichodorus* spp. (except *T. christiei*, *T. cottieri*, *T. porosus*, *T. primitivus*)

-

##### Secernentea

##### Tylenchida

##### Meloidogynidae

*Meloidogyne* spp. (except *M. ardenensis*, *M. hapla*, *M. incognita*, *M. javanica*, *M. naasi*)

-

##### Pratylenchidae

*Pratylenchus brachyurus*

root lesion nematode

#### Fungus

##### Ascomycota

##### Dothideales

##### Mycosphaerellaceae

*Didymellina intermedia*

black rot

*Mycosphaerella martagonis*

black blotch

##### Basidiomycota: Basidiomycetes

##### Agaricales

##### Tricholomataceae

*Armillaria mellea* (anamorph *Rhizomorpha subcorticalis*)

armillaria root rot

##### Auriculariales

##### Auriculariaceae

*Helicobasidium mompa*

violet root rot

##### Basidiomycota: Teliomycetes

##### Uredinales

##### Pucciniaceae

*Puccinia sporoboli* (anamorph *Aecidium lili*)

Rust

<i>Uromyces aecidiiformis</i>	rust fungi
<i>Uromyces holwayi</i>	-
<b>mitosporic fungi (Agonomycetes)</b>	
<b>Agonomycetales</b>	
<b>unknown Agonomycetales</b>	
<i>Rhizoctonia tuliparum</i>	basal rot
<i>Sclerotium rolfsii</i> var. <i>delphinii</i>	sclerotium rot
<i>Sclerotium wakkeri</i>	Blackleg
<b>mitosporic fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Macrophoma lili</i>	black root rot
<i>Phyllosticta liliicola</i>	black rot
<b>unknown Coelomycetes</b>	
<b>unknown Coelomycetes</b>	
<i>Colletotrichum lili</i>	-
<b>mitosporic fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	
<b>Moniliaceae</b>	
<i>Botrytis hyacinthi</i>	hyacinth blight
<i>Ramularia vallisumbrosae</i>	white mould
<b>Tuberculariales</b>	
<b>Tuberculariaceae</b>	
<i>Fusarium oxysporum</i> f. sp. <i>lili</i>	basal rot
<b>unknown Hyphomycetes</b>	
<b>unknown Hyphomycetes</b>	
<i>Aureobasidium microstictum</i>	-
<b>Bacterium</b>	
<b>Enterobacteriaceae</b>	
<i>Erwinia lili</i>	-
<b>Virus</b>	
<i>Apple stem grooving virus</i> [strains not in New Zealand]	-
<i>Lily rosette virus</i>	-
<i>Tobacco rattle virus</i> [strains not in New Zealand]	-
<i>Tomato ringspot virus</i> [strains not in New Zealand]	-

## *Lithocarpus densiflorus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Lithocarpus densiflorus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Cronartium quercuum*; *Ceratocystis fagacearum*; Tortricidae, *Phytophthora ramorum*

### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants (dormant) and Cuttings (dormant):**

##### **OPTION 1:**

**PEQ:** Level 2

**Minimum Period:** 6 months

- a. Additional declaration: "*Ceratocystis fagacearum* is not known to occur in \_\_\_\_\_ (the country or state where the plants/cuttings were grown) \_\_\_\_\_".  
**OR** (for cuttings)  
"The tree(s), from which this material was taken, was inspected during the previous growing season and no *Ceratocystis fagacearum* was detected".  
**OR** (for young plants)  
"The plants were inspected during the previous growing season and no *Ceratocystis fagacearum* was detected".
- b. Additional declaration: "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water".
- c. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

##### **OPTION 2:**

**PEQ:** Level 3

**Minimum Period:** 6 months

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Litchi*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Australia

**Quarantine Pests:** *Aceria litchii*; Xyloryctidae (Lepidoptera)

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2  
**Minimum Period:** 6 months

**Additional Declaration:**

"The plants were grown on a nursery that has been inspected for the presence of *Aceria litchii* and members of the Xyloryctidae and none were found".

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2

*Lophophora williamsii*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Lophophora williamsii*, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**Import permit:** an import permit is required. Before applying for an import permit, the importer must obtain written approval to import from:

**Director General of Health  
Ministry of Health  
PO Box 5013  
Wellington  
Attention: Advisor, Controlled Drug Licensing**

**Telephone: 04 496 2438**

*Malus*

<b>Scientific name</b>	<b>Commodity Sub-class</b>	<b>Date Issued</b>
<i>Malus sylvestris</i> var. <i>domestica</i>	Cuttings (dormant)	12 June 1998

## *Mangifera*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Mangifera*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, India, Pakistan, Mexico, Philippines

**Quarantine Pests:** *Xanthomonas campestris* pv. *mangiferae-indicae*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **For Whole Plants and Tissue Culture:**

**PEQ:** Level 2  
**Minimum Period:** 6 months

#### **Additional Declaration:**

"*Xanthomonas campestris* pv. *mangiferae-indicae* is not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

**OR**

"The plants were inspected during the growing season and no *Xanthomonas campestris* pv. *mangiferae-indicae* was detected".

## *Metrosideros*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Metrosideros*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Puccinia psidii*

#### **Entry Conditions:**

**Basic;** with variations and additional conditions as specified below:

##### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Additional declaration: “*Puccinia psidii* is not known to occur in \_\_\_\_\_ (the country or state of origin) \_\_\_\_\_”.

##### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Miscanthus x giganteus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Miscanthus x giganteus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Approved Countries:** United Kingdom and United States of America

**2. Type of material permitted entry:** Plants *in-vitro*

**3. Pests of *Miscanthus x giganteus***  
Refer to the enclosed pest list.

**4. Entry conditions:**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Miscanthus x giganteus* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

The full botanical name of *Miscanthus x giganteus* must be identified upon the phytosanitary certificate.

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Miscanthus x giganteus* plants in tissue culture have been:

- derived from mother plants which were not expressing symptoms of infection by regulated pests prior to the excision of the in-vitro plantlets.

AND

- derived from explant material which has been surfaced sterilised in a solution of 0.5% sodium hypochlorite and sterile water, or MAF approved alternative treatment.

AND

- propagated in culture media which is clear.

AND

- prepared by asexual reproduction (clonal techniques) under sterile conditions.

AND

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section. The following additional declarations must be identified on the phytosanitary certificate.

The *Miscanthus x giganteus* plants in-vitro in this consignment have been:

- derived from mother plants sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from *Leifsonia xyli* subsp. *xyli*, Miscanthus streak virus, and Sugarcane mosaic virus

AND

- derived from mother plants sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from *Ustilago scitaminea* **OR** derived from explants that have been subjected to two consecutive hot water treatments at a minimum temperature of 50°C for 3 hours per treatment **OR** two consecutive hot water treatments at a minimum temperature of 52°C for 1 hour per treatment

(iv) Inspection, Testing and Treatment of the consignment

Where an additional declaration cannot be attested to on the phytosanitary certificate by the NPPO, testing of material shall be completed in post-entry quarantine upon arrival in New Zealand as specified within the testing and treatment requirements in this schedule.

If an organism is detected which is not identified with the enclosed Pest List, refer to <http://www.maf.govt.nz/biosecurity/pests-diseases/registers-lists/boric/> to ascertain regulated status. If the organism is not identified or categorised within the register, please contact [plantimports@maf.govt.nz](mailto:plantimports@maf.govt.nz).

(v) Post-entry quarantine

**PEQ:** Level 2

**Quarantine Period:** A minimum post entry quarantine period of 60 days of active continuous growth, within environmental conditions comprising a minimum average daily temperature of 20°C, and 8 hour light period shall be required to complete inspections and/or testing for pests as specified within the enclosed Regulated Pest List.

The quarantine period may be extended if material is slow growing, environmental requirements are not met, pests are detected, or additional treatments/tests are required. Sub-culturing is not to be undertaken during the PEQ period without prior approval from MAF. The costs of all inspections, tests and treatments while the *Miscanthus x giganteus* plant material is in PEQ shall be borne by the importer.

# Regulated Pest List for Miscanthus:

## Bacteria

<i>Acidovorax avenae</i> ssp. <i>avenae</i>	Bacterial leaf blight
<i>Leifsonia xyli</i> subsp. <i>Xyli</i>	Sugarcane ratoon stunting disease

## Fungi

<i>Acremonium</i> sp.	Black bundle disease
<i>Colletotrichum</i> sp.	Leaf spot
<i>Diaporthe</i> sp.	Canker
<i>Diplodia</i> sp.	Blight
<i>Drechslera gigantea</i>	Eyespot
<i>Fusarium miscanthi</i>	Rot
<i>Fusarium pallidoroseum</i>	Rot
<i>Glomerella</i> sp.	Leaf spot
<i>Glomerella tucumanensis</i>	Leaf spot
<i>Helminthosporium</i> sp.	Eyespot
<i>Leptosphaeria</i> sp.	Canker
<i>Magnaporthe salvinii</i>	Stem rot
<i>Mycosphaerella recutita</i>	Leaf blight
<i>Mycosphaerella striatiformans</i>	Leaf spot
<i>Nigrospora</i> sp.	Stalk rot
<i>Passalora koepkei</i>	Yellow spot
<i>Peronosclerospora</i> sp.	Downy mildew
<i>Phlyctema</i> sp.	Canker
<i>Phoma</i> sp.	Blight
<i>Phomopsis</i> sp.	Blight
<i>Phyllachora</i> sp.	Leaf spot
<i>Puccinia melanocephala</i>	Sugarcane rust
<i>Ramularia</i> sp.	Anthraxnose
<i>Rhizoctonia</i> sp.	Root rot
<i>Stagonospora</i> sp.	Scorch
<i>Thanatephorus cucumeris</i>	Blight
<i>Ustilago scitaminea</i>	Sugarcane smut
<i>Verticillium</i> sp.	Verticillium wilt

## Mites

<i>Schizotetranychus celarius</i>	Bamboo mite
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## Viruses

<i>Miscanthus streak virus</i>
<i>Sugarcane mosaic virus</i>

## Treatment and Testing Requirements during post entry quarantine:

Note: Treatment and testing requirements identified within this table are required to be undertaken when official assurances specified in this schedule cannot be provided by the exporting country's NPPO.

ORGANISM TYPE	MAFBNZ ACCEPTABLE MEASURES
<b>Fungi</b>	
<i>Ustilago scitaminea</i>	PCR/BIO-PCR, <b>OR</b> two consecutive hot water treatments at a minimum temperature of 50°C for 3 hours per treatment <b>OR</b> two consecutive hot water treatments at a minimum temperature of 52°C for 1 hour per treatment.
<b>Bacteria</b>	
<i>Leifsonia xyli</i> subsp. <i>xyli</i>	PCR/BIO-PCR, <b>OR</b> fluorescent-antibody staining of sap extracts, concentrated on membrane filters by filtration with observation by epifluorescence microscopy.
<b>Viruses</b>	
<i>Miscanthus streak virus</i>	PCR
<i>Sugarcane mosaic virus</i>	PCR or ELISA

### Notes:

- 1. Unit for testing:** Units selected for testing must be representative of the clonal line imported. Each imported plantlet must be individually labelled identifying 'line' differences where these exist.
- 2. Sample size for testing:** Sample size required for testing will be determined by MAF based on the specific test to be undertaken.
- 3. Enzyme linked immunosorbent assay (ELISA) tests:** All ELISA tests must be validated using positive controls prior to use in quarantine testing. Positive, negative, and buffer controls must be used in all tests unless indicated otherwise by MAF.
- 4. Polymerase chain reaction (PCR) tests:** All PCR tests must be validated using positive controls prior to use in quarantine testing. Positive and no template controls must be used in all tests. Internal control primers and a negative plant control shall be used in PCR tests unless indicated otherwise by MAF.
- 5. Inspection:** The operator of the PEQ facility must inspect the plants for signs of pest and disease at least twice per week during periods of active growth.
- 6. Other internationally recognised testing methods:** May be accepted by MAF Biosecurity New Zealand with prior notification.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Musa*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Cosmopolites sordidus*; *Fusarium oxysporum* f.sp. *cubense*; *Mycosphaerella fijiensis*; *Pseudomonas solanacearum*; *Radopholus similis*; Bunchy top virus

**Entry Conditions :** **Basic**; with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 3  
**Minimum Period:** 3 months

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer;

**PLUS**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of Bunchy top virus".

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Nandina*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Alternanthera mosaic virus*, *Plantago asiatica mosaic virus* (synonym *Nandina mosaic virus*), *Xylella fastidiosa*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.11)
- b. The following additional declaration shall be endorsed on the phytosanitary certificate:

"*Alternanthera mosaic virus* and *Plantago asiatica mosaic virus* are not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

**B. For Tissue Cultures:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of *Alternanthera mosaic virus* and *Plantago asiatica mosaic virus* "

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Nacissus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Frankliniella occidentalis*; *Hepialus lupulinus*; *Lilioceris lili*; *Pratylenchus scribneri*; *Ramularia vallisumbrosae*; *Sclerotinia polyblastis*; *Steneotarsonemus laticeps*; virus diseases.

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**No import permit is required.**

**PEQ:** None

**Additional Declaration(s):**

**1) For bulbs produced under a MAF-approved Dutch bulb propagation scheme:**

"In addition to inspection of the dormant bulbs prior to shipment, the imported bulbs meet the requirements of the BKD Class 1 or ALG [choose one] bulb certification scheme."

**OR**

**2) For bulbs NOT produced under a MAF-approved bulb propagation scheme:**

"In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests."

**OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Olea*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**b. Type of *Olea* nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

**c. Pests of *Olea***

Refer to the pest list.

**d. Entry conditions for:**

**3.1 *Olea* cuttings and tissue culture from any country**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Olea* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Olea* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section [cuttings only]. No additional declarations are required.

(iv) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(v) Post-entry quarantine

**PEQ:** All *Olea* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator*.

**Quarantine Period and Inspection, Testing and Treatment Requirements:** The nursery stock will be grown for a minimum period of 12 months in post-entry quarantine and will be inspected, treated and/or tested for regulated pests as specified in the “Inspection, Testing and Treatment Requirements for *Olea*”, at the expense of the importer. Twelve months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Olea*

## REGULATED PESTS (actionable)

### Insect

### Insecta

### Insecta

#### Coccidae

*Saissetia privigna* black scale

#### Coleoptera

##### Attelabidae

*Rhynchites cribripennis* twig cutter

##### Buprestidae

*Anthaxia ariadna* wood-boring beetle

##### Scolytidae

*Hylesinus fraxini* bark beetle

*Hylesinus oleiperda* bark beetle

*Hylesinus toranio* bark beetle

*Phloeotribus oleae* bark beetle

*Phloeotribus scarabaeiodes* bark beetle

*Xylosandrus compactus* black twig borer

#### Diptera

##### Cecidomyiidae

*Thomasiniana* sp. olive bark midge

##### Asterolecaniidae

*Pollinia pollini* globe shaped olive scale

#### Coccidae

*Ceroplastes rusci* fig wax scale

*Lichtensia viburni* scale

*Metacaronema japonica* scale insect

#### Diaspididae

*Aonidomytilus espinosai* scale

*Hemiberlesia palmae* palm scale

*Leucaspis riccae* scale

*Lindingaspis ferrisi* scale

*Parlatoria oleae* olive scale

*Pseudaulacaspis pentagona* white peach scale

*Selenaspis articulatus* West Indian red scale

#### Lepidoptera

##### Pyralidae

*Euzophera pinguis* bark borer

### Mite

### Arachnida

#### Acarina

##### Eriophyidae

*Aceria cretica* mite

*Aceria oleae* olive mite

*Aculops benakii* olive yellow spot mite

*Aculus olearius* olive mite

*Ditrymacus athiasellus* olive mite

*Eriophyes oleae* olive bud mite

*Eriophyes olivi* olive mite

*Oxycenus maxwelli* olive leaf and flower mite

*Oxycenus niloticus* olive leaf and flower mite

*Oxycenus noloticus* olive leaf and flower mite

*Tegonotus hassani* olive rust mite

##### Tenuipalpidae

*Brevipalpus chalkidicus* false spider mite

*Brevipalpus macedonicus* false spider mite

<i>Brevipalpus oleae</i>	false spider mite
<i>Brevipalpus olearius</i>	false spider mite
<i>Brevipalpus olivicola</i>	false spider mite
<i>Raoiella macfarlanei</i>	false spider mite
<i>Tenuipalpus caudatus</i>	false spider mite
<b>Tetranychidae</b>	
<i>Eotetranychus lewisi</i>	big beaked plum mite
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Dothideales</b>	
<b>Capnodiaceae</b>	
<i>Capnodium elaeophilum</i>	sooty mould
<b>Elsinoaceae</b>	
<i>Elsinoe oleae</i>	olive scab
<b>Unknown Dothideales</b>	
<i>Massariella oleae</i>	bark canker
<i>Massariella zambettakiana</i>	canker
<i>Zukalia purpurea</i>	black mildew
<b>Xylariales</b>	
<b>Xylariaceae</b>	
<i>Xylaria sicula</i>	root rot
<b>Basidiomycota</b>	
<b>Agaricales</b>	
<b>Agaricaceae</b>	
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	armillaria root rot
<b>Boletales</b>	
<b>Paxillaceae</b>	
<i>Omphalotus olearius</i>	wood rot
<b>Ganodermatales</b>	
<b>Ganodermataceae</b>	
<i>Ganoderma lucidum</i> (anamorph <i>Polyporus lucidus</i> )	wood rot
<b>Hymenochaetales</b>	
<b>Hymenochaetaceae</b>	
<i>Phellinus igniarius</i>	wood rot
<b>Oomycota</b>	
<b>Pythiaceae</b>	
<b>Pythaceae</b>	
<i>Phytophthora ramorum</i>	Sudden oak death disease
<b>Poriales</b>	
<b>Coriolaceae</b>	
<i>Fomes fomentarius</i>	
<i>Fomes fulvus</i>	
<i>Fomes salicinus</i>	
<i>Fomes torulosus</i>	wood rot
<i>Fomes yucatonensis</i>	wood rot
<b>Polyporaceae</b>	
<i>Polyporus biennis</i>	wood rot
<i>Polyporus oleae</i>	wood rot
<b>Stereales</b>	
<b>Sistotremataceae</b>	
<i>Trechispora brinkmanii</i> (anamorph <i>Phymatotrichopsis omnivorum</i> )	Texas root rot
<b>Mitosporic Fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Camarosporium dalmatica</i>	brown spot
<i>Cytospora oleina</i>	canker
<i>Macrophoma dalmatica</i>	fruit rot

<i>Phoma incompta</i>	stem blight
<i>Phyllosticta oleae</i>	phyllosticta leaf spot
<i>Septoria obesa</i>	leaf spot
<i>Septoria oleae</i>	leaf spot
<i>Septoria oleagina</i>	leaf spot
<i>Septoria serpentaria</i>	leaf spot
<i>Sphaeropsis dalmatica</i>	stem gall
<i>Sphaeropsis oleae</i>	stem gall
<b>Unknown Coelomycetes</b>	
<b>Unknown Coelomycetes</b>	
<i>Cylindrosporium olivae</i>	leaf spot
<b>Bacterium</b>	
<b>Pseudomonadaceae</b>	
<i>Pseudomonas syringae</i> pv. <i>garcae</i>	twig blight
<b>Virus</b>	
<i>Cherry leaf roll virus</i> [strains not in New Zealand]	-
<i>Olive latent 1 virus</i>	-
<i>Olive latent 2 virus</i>	-
<i>Olive latent ringspot virus</i>	-
<i>Olive leaf yellowing-associated virus</i>	-
<i>Olive vein yellow virus</i>	-
<i>Strawberry latent ringspot virus</i> [strains not in New Zealand]	-
<b>Phytoplasma</b>	
Olive witches' broom phytoplasma	-
<b>Disease of unknown aetiology</b>	
Infectious yellows	-
Leaf malformation	-
Olive sickle leaf disease	-
Olive yellow mosaic disease	-
Olive yellow mottling and decline	-
Partial paralysis	-

## Inspection, Testing and Treatment Requirements for *Olea*

ORGANISM TYPES	MAF-ACCEPTED METHODS (See notes below)
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions) [cuttings only].
<b>Mites</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions) [cuttings only] or binocular microscope inspection in PEQ [plants in tissue culture only].
<b>Fungi</b>	Growing season inspection in PEQ for disease symptom expression.
<b>Bacterium</b>	
<i>Pseudomonas syringae</i> pv. <i>garcae</i>	Growing season inspection in PEQ for disease symptom expression.
<b>Virus</b>	
<i>Cherry leaf roll virus</i> [strains not in New Zealand]	ELISA or PCR AND herbaceous indicators Ca, Cq and Nb AND TEM.
<i>Olive latent 1 virus</i>	Herbaceous indicators Ca, Cq and Nb AND TEM.
<i>Olive latent 2 virus</i>	Herbaceous indicators Ca, Cq and Nb AND TEM.
<i>Olive latent ringspot virus</i>	Herbaceous indicators Ca and Cq AND TEM.
<i>Olive leaf yellowing-associated virus</i>	TEM.
<i>Olive vein yellow virus</i>	TEM.
<i>Strawberry latent ringspot virus</i> [strains not in New Zealand]	ELISA or PCR AND herbaceous indicators Ca and Cq AND TEM.
<b>Phytoplasmas</b>	Woody indicators AND PCR using the universal phytoplasma fU5/rU3 primers (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 primers (Gundersen <i>et al.</i> 1996).
<b>Diseases of unknown aetiology</b>	Growing season inspection in PEQ for disease symptom expression.

### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. Transmission electron microscopy (TEM) – each plant must be observed under the TEM for virus particles.
3. Indicator hosts: *Chenopodium amaranticolor* (Ca), *Chenopodium quinoa* (Cq), and *Nicotiana benthamiana* (Nb). At least two plants of each indicator species must be used in mechanical inoculation tests.
4. Indicator plants must be grown under appropriate temperatures and must be shaded for 24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
5. Enzyme linked immunosorbent assay (ELISA); Polymerase chain reaction (PCR).
6. Testing must be carried out on *Olea* plants while they are in active growth. For bioassay and ELISA, plants shall be sampled from at least two positions including a young, fully expanded leaf at the top of the plant and an older leaf from a midway position.
7. PCR and ELISA must be validated using positive controls/reference material prior to use in quarantine testing.
8. Positive and negative controls must be used in ELISA tests.
9. Positive and negative controls (including a blank water control) must be used in PCR. Ideally positive internal controls and a negative plant control should be used. Internal controls in PCR tests are important to avoid the risk of false negatives.
10. Inspect *Olea* plants for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.
11. With prior notification, MAF will accept other internationally recognised testing methods.

## References

- Gundersen, D.E., Lee, I.M. 1996. Ultrasensitive detection of phytoplasmas by nested-PCR assays using two universal primer pairs. *Phytopathologia Mediterranea* 35: 144-151.
- Lorenz, K.H., Scheider, B., Ahrens, U., Seemuller, E. 1995. Detection of the Apple proliferation and Pear decline phytoplasmas by PCR Amplification of ribosomal and nonribosomal DNA. *Phytopathology* 85: 771-776.

## ***Paeonia* (herbaceous species)**

**Note:** These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Paeonia* (herbaceous)”.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom, United States of America

**Quarantine Pests:** *Cronartium flaccidum*; *Phymatotrichopsis omnivora*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

### **For Dormant Tubers:**

**PEQ:** Level 1 or Level 2 (see below)

**Minimum Period:** 3 months

### **Additional Declaration(s):**

1. "The dormant tubers have been sourced from a “Pest free area” or “Pest free place of production”, free from *Cronartium flaccidum*".

2. "The dormant tubers have been sourced from a “Pest free area”, free from *Phymatotrichopsis omnivora*".

### **OR**

(i) "The dormant bulbs have been sourced from a “Pest free place of production”, free from *Phymatotrichopsis omnivora*".

### **AND**

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 “Pesticide treatments for dormant bulbs”. If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate.

### **AND**

(iii) Post-entry quarantine: Upon arrival in New Zealand the dormant bulbs will require a period of at least 3 months in Level 2 post-entry quarantine.

## ***Paeonia* (tree species)**

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Paeonia* (tree species)”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, United Kingdom, United States of America

**Quarantine Pests:** *Cronartium flaccidum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Isolation:** open ground - 400m from any *Pinus* tree

#### **Additional Declarations:**

1. "*Cronartium flaccidum* is not known to occur in \_\_\_ (the country or state where the plants were grown) \_\_\_".
2. "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2;

## *Papaver somniferum*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Papaver somniferum*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**Import permit:** an import permit is required. Before applying for an import permit, the importer must obtain written approval to import from:

**Director General of Health  
Ministry of Health  
PO Box 5013  
Wellington  
Attention: Advisor, Controlled Drug Licensing**

**Telephone: 04 496 2438**

## *Paulownia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Paulownia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia

**Quarantine Pests:** Witches broom phytoplasma

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

"Witches broom phytoplasma is not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2;

#### **PLUS:**

#### **Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of Witches broom phytoplasma".

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Persea*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Persea* nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

**2. Pests of *Persea***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Persea* cuttings and tissue culture from any country**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Persea* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Persea* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a “Pest free area” or “Pest free place of production”, free from *Avocado cryptic virus 3*, *Potato spindle tuber viroid* and Avocado black streak disease.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section [cuttings only] and by providing the following additional declaration to the phytosanitary certificate:

"The *Persea* cuttings / plants in tissue culture [choose ONE option] have been:

- sourced from a “Pest free area” and/or a “Pest free place of production”, free from *Avocado cryptic virus 3*, *Potato spindle tuber viroid* and Avocado black streak disease."

(iv) *Post-entry quarantine*

**PEQ:** All *Persea* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator*.

**Quarantine Period and Inspection, Testing and Treatment Requirements:** The nursery stock will be grown for a minimum period of 12 months in post-entry quarantine and will be inspected, treated and/or tested for regulated pests as specified in the “Inspection, Testing and Treatment Requirements for *Persea*”, at the expense of the importer. Twelve months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Persea*

## REGULATED PESTS (actionable)

### Insect

#### Insecta

##### Coleoptera

###### Chrysomelidae

*Monolepta apicalis*

monolepta beetle

*Monolepta australis*

red-shouldered leaf beetle

###### Curculionidae

*Copturus aguacatae*

branch boring weevil

*Diaprepes abbreviatus*

citrus weevil

*Heilipus squamosus*

-

*Naupactus xanthographus*

fruit tree weevil

##### Hemiptera

###### Coreidae

*Amblypelta lutescens*

banana spotting bug

*Amblypelta nitida*

fruit-spotting bug

*Pseudothoraptus wayi*

coreid bug

###### Lygaeidae

*Nysius ericae*

false chinch bug

###### Tingidae

*Pseudacysta perseae*

avocado lace bug

##### Homoptera

###### Aleyrodidae

*Aleurocanthus woglumi*

citrus blackfly

*Parabemisia myricae*

Japanese bayberry whitefly

*Paraleyrodes minei*

whitefly

*Paraleyrodes perseae*

plumeria whitefly

*Tetraleurodes perseae*

whitefly

*Trialeurodes floridensis*

avocado whitefly

###### Coccidae

*Ceroplastes floridensis*

Florida wax scale

*Ceroplastes rubens*

red wax scale

*Ceroplastes rusci*

fig wax scale

*Chloropulvinaria psidii*

guava scale

*Protopulvinaria pyriformis*

pyriform scale

*Pulvinaria mammeae*

-

###### Diaspididae

*Aonidiella orientalis*

oriental yellow scale

*Aspidiotus destructor*

coconut scale

*Chrysomphalus aonidum*

Florida red scale

*Chrysomphalus dictyospermi*

dictyospermum scale

*Fiorinia fioriniae*

fiorinia scale

*Pinnaspis strachani*

hibiscus snow scale

*Selenaspidus articulatus*

West Indian red scale

###### Margarodidae

*Icerya seychellarum*

Seychelles scale

###### Pseudococcidae

*Dysmicoccus brevipes*

pineapple mealybug

*Ferrisia virgata*

striped mealybug

*Nipaecoccus nipae*

coconut mealybug

*Planococcus citri*

citrus mealybug

###### Psyllidae

*Trioza aguacate*

psyllid

*Trioza anceps*

psyllid

*Trioza godoyae*

psyllid

*Trioza perseae*

psyllid

##### Hymenoptera

<b>Formicidae</b>	
<i>Atta cephalotes</i>	leaf-cutting ant
<b>Lepidoptera</b>	
<b>Geometridae</b>	
<i>Ascotis selenaria</i>	mugwort looper
<i>Sabulodes aegrotata</i>	omnivorous looper
<b>Hesperiidae</b>	
<i>Pyrrhopyge chalybea</i>	swift moth
<b>Noctuidae</b>	
<i>Peridroma margaritosa</i>	-
<i>Prodenia eridania</i>	-
<i>Pseudoplusia includens</i>	soybean looper
<b>Oecophoridae</b>	
<i>Stenoma catenifer</i>	stenomid moth
<b>Pyralidae</b>	
<i>Cryptoblabes gnidiella</i>	Christmas berry webworm
<i>Stericta albifasciata</i>	-
<b>Tortricidae</b>	
<i>Amorbia cuneana</i>	leafroller
<i>Amorbia emigratella</i>	Mexican leafroller
<i>Amorbia essigana</i>	leafroller
<i>Argyrotaenia citrana</i>	orange tortrix
<i>Cacoecimorpha pronubana</i>	carnation leafroller
<i>Cryptophlebia leucotreta</i>	false codling moth
<i>Homona spargotis</i>	avocado leafroller
<i>Isotenes miserana</i>	orange fruitborer
<i>Platynota stultana</i>	omnivorous leafroller
<b>Thysanoptera</b>	
<b>Thripidae</b>	
<i>Retithrips syriacus</i>	black vine thrips
<i>Selenothrips rubrocinctus</i>	red-banded thrips
<b>Mite</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Tetranychidae</b>	
<i>Oligonychus coffeae</i>	tea red spider mite
<i>Oligonychus perseae</i>	spider mite
<i>Oligonychus punicae</i>	avocado brown mite
<i>Oligonychus yothersi</i>	avocado red mite
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Phyllachorales</b>	
<b>Phyllachoraceae</b>	
<i>Glomerella cingulata</i> var. <i>minor</i> (anamorph)	anthracnose
<i>Colletotrichum gloeosporioides</i> var. <i>minus</i>	
<b>Xylariales</b>	
<b>Xylariaceae</b>	
<i>Rosellinia bunodes</i>	-
<i>Rosellinia pepo</i>	-
<b>Oomycota</b>	
<b>Pythiales</b>	
<b>Pythiaceae</b>	
<i>Phytophthora palmivora</i>	black rot
<b>mitosporic fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Phomopsis perseae</i>	fruit rot
<b>mitosporic fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	

<b>Dematiaceae</b>	
<i>Pseudocercospora purpurea</i>	cercospora spot blotch
<b>unknown Hyphomycetes</b>	
<b>unknown Hyphomycetes</b>	
<i>Stilbella cinnabarina</i>	-
<b>Bacteria</b>	
<b>Pseudomonadaceae</b>	
<i>Xylella fastidiosa</i>	Pierce's disease
<b>Virus</b>	
<i>Avocado cryptic virus 3</i>	-
<b>Viroid</b>	
<i>Avocado sunblotch viroid</i> [strains not in New Zealand]	-
<i>Potato spindle tuber viroid</i>	-
<b>Disease of unknown aetiology</b>	
Avocado black streak	-

## Inspection, Testing and Treatment Requirements for *Persea*

ORGANISM TYPES	MAF-ACCEPTED METHODS (See notes below)
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions) [cuttings only].
<b>Mites</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions) [cuttings only] or binocular microscope inspection in PEQ [plants in tissue culture only].
<b>Fungi</b>	Growing season inspection in PEQ for disease symptom expression.
<b>Bacteria</b>	
<i>Xylella fastidiosa</i>	Growing season inspection in PEQ for disease symptom expression. AND PCR (Minsavage <i>et al.</i> , 1994)
<b>Virus</b>	
<i>Avocado cryptic virus 3</i>	Pest free area or Pest free place of production AND Growing season inspection in PEQ for disease symptom expression.
<b>Viroid</b>	
<i>Avocado sunblotch viroid</i> [strains not in New Zealand]	Hybridisation or PAGE or PCR (Schnell <i>et al.</i> 1997) (two sets).
<i>Potato spindle tuber viroid</i>	Pest free area or Pest free place of production AND Growing season inspection in PEQ for disease symptom expression.
<b>Disease of unknown aetiology</b>	
Avocado black streak	Pest free area or Pest free place of production AND Growing season inspection in PEQ for disease symptom expression.

### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. Testing must be carried out on *Persea* plants while they are in active growth.
3. Polymerase chain reaction (PCR), Polyacrylamide gel electrophoresis (PAGE) and hybridisation must be validated using positive controls prior to use in quarantine testing. Positive and negative controls (including a blank water control) must be used in molecular tests. Ideally positive internal controls and a negative plant control should be used.
4. Inspect *Persea* plants for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.
5. With prior notification, MAF will accept other internationally recognised testing methods.

### References

Schnell RJ, Kuhn DN, Ronning CM, Harkins D (1997). Application of RT-PCR for indexing avocado sunblotch viroid. *Plant Disease B*: 1023-1026.

## *Phalaenopsis*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Phalaenopsis*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Capsicum chlorosis virus*, *Basella rugose mosaic virus*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **B. For Whole Plants in growing media from Taiwan**

**No import permit is required.**

**PEQ:** None

**Specific Requirements:** Sections 2.2.1.6 and 2.2.1.8 of the Basic Conditions are not required.

#### **Additional Declarations:**

“The *Phalaenopsis* spp. whole plants in MAF-approved growing media in this consignment:

1. have been sourced from mother stock that has been tested for, and found free from *Capsicum chlorosis virus* and *Basella rugose mosaic virus*,  
AND
2. comply with the requirements of the Offshore Assurance Programme (OAP) implemented by New Zealand MAF and Taiwan BAPHIQ,  
AND
3. have been inspected and found free from regulated viruses, insects, mites, fungi and bacteria,  
AND
4. have been treated with appropriate broad-spectrum insecticide and miticide drench no more than 14 days prior to export to New Zealand.”

#### **C. For Tissue Culture**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Philodendron*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Philodendron*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Phoenix*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Australia, Hawaii, mainland USA

**Quarantine Pests:** Lethal yellowing; cadang-cadang; Fusarium wilt

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**PEQ:** Level 2

**Minimum Period:** 3 months

**Height Limit:** Plants must not exceed 1.5m in height

**Additional Declaration:**

"Cadang cadang, lethal yellowing and *Fusarium oxysporum* f.sp. *canariensis* are not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_."

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Photinia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Gymnosporangium* spp., *Phytophthora ramorum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Additional Declarations:**

1. "*Gymnosporangium* spp. are not known to occur on \_\_\_\_\_ (name of plant species) \_\_\_\_\_ in \_\_\_\_\_ (the country or state where the plants were produced) \_\_\_\_\_".

**OR**

"The plants were from a crop inspected during the growing season and no rust diseases were detected".

2. "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water, prior to export".

3. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Planera*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Elm mosaic virus, Elm phloem necrosis

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**For Whole Plants and Tissue Cultures:**

**PEQ:** Level 3

**Minimum Period:** 3 months

## *Polyscias*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Polyscias*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Poncirus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Poncirus* nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

**2. Pests of *Poncirus***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Poncirus* cuttings from offshore MAF-accredited facilities (quarantine stations)**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Poncirus*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Poncirus*.

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Poncirus* cuttings exported to New Zealand.

(ii) Inspection, Testing and Treatments of the consignment

The inspection, testing and treatment requirements for specified regulated pests must be undertaken at the accredited facility as specified in the agreement between MAF and the accredited facility operator. Refer to *Poncirus* Inspection, Testing and Treatment Requirements following the *Poncirus* pest list.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Poncirus* cuttings have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).  
AND
- sourced from either mother plants that have been kept in insect proof plant houses or from open ground mother plants  
AND
- held and tested for/classified free from specified regulated pests at a MAF-accredited facility  
AND
- held in a manner to ensure that infestation/reinfestation does not occur, following testing (and certification) at the accredited facility.

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the

phytosanitary certificate:

"The *Poncirus* cuttings in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with New Zealand's current phytosanitary requirements.

AND

- sourced from mother plants that have been kept in insect proof plant houses/sourced from open ground mother plants [choose one].

AND

- held and tested for/classified free from specified regulated pests at the accredited facility as required in the agreement between MAF and the accredited facility operator.

AND

- held in a manner to ensure infestation/reinfestation does not occur following testing (and certification), at the accredited facility."

(v) Post-entry quarantine

**PEQ:** Level 2

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pathogens. Indicative minimum quarantine periods are: 6 months for *Poncirus* cuttings sourced from mother plants that have been kept in insect proof plant houses, or 16 months for *Poncirus* cuttings sourced directly from open ground mother plants. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.2 *Poncirus* cuttings from non-accredited facilities in any country

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Poncirus* cuttings exported to New Zealand.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Poncirus* cuttings have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

(iii) Additional declarations to the phytosanitary certificate

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

"The *Poncirus* cuttings in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with the current phytosanitary requirements of MAF."

(iv) Inspection, Testing and Treatments of the consignment

Following inspection at the border, upon arrival, the *Poncirus* cuttings will be directed to a facility accredited to the MAF standard BMG-STD-TREAT: *Approval of Suppliers Providing Treatment of Imported Risk Goods and Forestry/Plant Related Material for Export*, to be sprayed/dipped in MAF-approved miticide and insecticides as described in section 2.2.1.6 of the basic conditions.

Following treatment, testing for specified regulated pests must be undertaken at a New Zealand Level 3 MAF-accredited facility. Refer to *Poncirus* Inspection, Testing and Treatment Requirements following the *Poncirus* pest list.

(v) Post-entry quarantine

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pathogens. 16 months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments are required.

### 3.3 *Poncirus* plants in tissue culture from offshore MAF-accredited facilities

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Poncirus*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Poncirus*.

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Poncirus* tissue culture exported to New Zealand.

(ii) Pest proof container and growing media for tissue culture

Cultures imported in a growing media must have been grown in the vessel in which they are imported. The container must be rigid, and either clear plastic or clear glass. The tissue culture media must not contain charcoal.

(iii) Inspection, Testing and Treatments of the consignment

The inspection, treatment and testing requirements for specified pests must be undertaken at the accredited facility as specified in the arrangement between MAF and the accredited facility operator. Refer to *Poncirus* Inspection, Testing and Treatment Requirements following the *Poncirus* pest list.

(iv) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Poncirus* tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

AND

- held and tested for/classified free from specified regulated pests at a MAF-accredited facility and,

AND

- held in a manner to ensure that infestation/reinfestation does not occur, following testing (and certification) at the accredited facility.

(v) Additional declarations to the phytosanitary certificate

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

"The *Poncirus* tissue culture in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with New Zealand's current phytosanitary requirements.

AND

- held and tested for/classified free from specified regulated pests at the accredited facility as specified in the agreement between MAF and the accredited facility operator.

AND

- held in a manner to ensure infestation/reinfestation does not occur following testing (and certification), at the accredited facility."

(vi) Post-entry quarantine

**PEQ:** Level 2

**Quarantine Period:** This is the time required to complete inspections and/or indexing to detect regulated pests. Six months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments are required.

### 3.4 *Poncirus* plants in tissue culture from non-accredited facilities in any country

(i) Documentation

**Import permit is required**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Poncirus* nursery stock exported to New Zealand.

(ii) Pest proof container and growing media for tissue culture

Cultures imported in a growing media must have been grown in the vessel in which they are imported. The container must be rigid, and either clear plastic or clear glass. The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Poncirus* tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF (refer to the pest list).

(iv) Additional declarations to the phytosanitary certificate

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

"The *Poncirus* tissue culture in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests specified by MAF, and to conform with the current phytosanitary requirements of MAF."

(v) Inspection, Testing and Treatments of the consignment

Upon arrival, the inspection, treatment and testing requirements for specified pests must be undertaken at a New Zealand Level 3 MAF-accredited facility. Refer to *Poncirus* Inspection, Testing and Treatment Requirements following the *Poncirus* pest list.

(vi) Post-entry quarantine

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and or indexing to detect regulated pests. 16 months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected or treatments required.

# Pest List for *Poncirus*

## REGULATED PESTS (actionable)

### Insect

#### Insecta

#### Coleoptera

##### Bostrichidae

<i>Apate indistincta</i>	shot-hole borer
<i>Apate terebrans</i>	shot-hole borer

##### Buprestidae

<i>Agrilus alesii</i>	flatheaded citrus borer
<i>Agrilus auriventris</i>	citrus flatheaded borer

##### Cerambycidae

<i>Anoplophora malasiaca</i>	white-spotted longicorn beetle
<i>Chelidonium gibbicolle</i>	-
<i>Dihammus vastator</i>	fig longhorn
<i>Melanauster chinensis</i>	-
<i>Paradisterna plumifera</i>	speckled longicorn
<i>Promeces linearis</i>	-
<i>Skeletodes tetrops</i>	longhorn beetle
<i>Strongylurus thoracicus</i>	pittosporum longicorn
<i>Uracanthus cryptophagus</i>	citrus branch borer

##### Chrysomelidae

<i>Colasposoma fulgidum</i>	bluegreen citrus nibbler
<i>Colasposoma scutellare</i>	-
<i>Geloptera porosa</i>	pitted apple beetle
<i>Luperomorpha funesta</i>	mulberry flea beetle
<i>Monolepta australis</i>	red-shouldered leaf beetle
<i>Sebaethe fulvipennis</i>	flea beetle

##### Coccinellidae

<i>Cheilomenes lunata</i> [Animals Biosecurity]	-
<i>Chilocorus cacti</i> [Animals Biosecurity]	-
<i>Chilocorus distigma</i> [Animals Biosecurity]	-
<i>Chilocorus nigrita</i> [Animals Biosecurity]	-
<i>Exochomus flavipes</i> [Animals Biosecurity]	-
<i>Pentilia castanea</i> [Animals Biosecurity]	-
<i>Rhyzobius lophanthae</i> [Animals Biosecurity]	-
<i>Scymnus nanus</i> [Animals Biosecurity]	-
<i>Serangium parcesetosum</i> [Animals Biosecurity]	-
<i>Stethorus aethiops</i> [Animals Biosecurity]	-
<i>Stethorus histrio</i> [Animals Biosecurity]	-
<i>Stethorus punctata picipes</i> [Animals Biosecurity]	-

##### Curculionidae

<i>Amystax fasciatus</i> [Animals Biosecurity]	-
<i>Artipus</i> sp.	-
<i>Brachycerus citriperda</i>	-
<i>Callirhopalus bifasciatus</i>	two-banded Japanese weevil
<i>Dereodus recticollis</i>	-
<i>Diaprepes abbreviatus</i>	citrus weevil
<i>Diaprepes</i> spp.	-
<i>Eutinophaea bicristata</i>	citrus leaf-eating weevil
<i>Leptopius squalidus</i>	fruit tree root weevil
<i>Naupactus xanthographus</i>	fruit tree weevil
<i>Otiorhynchus cribricollis</i>	cribrate weevil
<i>Pachnaeus citri</i>	-
<i>Pachnaeus litus</i>	citrus root weevil
<i>Perperus lateralis</i>	white-striped weevil
<i>Prepodes</i> spp.	-
<i>Protostrophus avidus</i>	weevil

<i>Sciobius marshalli</i>	citrus snout beetle
<i>Sympiezomias lewisi</i>	-
<b>Lucanidae</b>	
<i>Prosopocoilus spencei</i>	-
<b>Scarabaeidae</b>	
<i>Hypopholis indistincta</i>	scarab beetle
<i>Maladera matrida</i>	scarab beetle
<b>Scolytidae</b>	
<i>Salagena</i> sp.	-
<i>Xylosandrus germanus</i>	alnus ambrosia beetle
<b>Diptera</b>	
<b>Cecidomyiidae</b>	
<i>Contarinia citri</i>	leafcurling midge
<i>Contarinia okadai</i>	citrus flower gall midge
<i>Trisopsis</i> sp.	-
<b>Chamaemyiidae</b>	
<i>Leucopis alticeps</i> [Animals Biosecurity]	-
<b>Drosophilidae</b>	
<i>Drosophila paulistorum</i>	-
<i>Drosophila pseudoobscura</i>	-
<i>Drosophila simulans</i>	-
<i>Drosophila willistoni</i>	-
<b>Tephritidae</b>	
<i>Dirioxa pornia</i>	island fruit fly
<b>Hemiptera</b>	
<b>Anthocoridae</b>	
<i>Orius thripoborus</i> [Animals Biosecurity]	-
<i>Thripheps thripoborus</i> [Animals Biosecurity]	-
<b>Coreidae</b>	
<i>Acanthocoris striicornis</i>	larger squash bug
<i>Anoplocnemis curvipes</i>	coreid bug
<i>Leptoglossus membranaceus</i>	coreid bug
<i>Mictis profana</i>	crusader bug
<i>Paradasynus spinosus</i>	squash bug
<i>Veneza phyllopus</i>	leaf-footed bug
<b>Lygaeidae</b>	
<i>Nysius vinitor</i>	Rutherglen bug
<b>Miridae</b>	
<i>Austropeplus</i> sp.	citrus blossom bug
<b>Pentatomidae</b>	
<i>Antestia variegata</i>	antestia bug
<i>Antestiopsis orbitalis</i>	-
<i>Antestiopsis variegata</i>	antestia bug
<i>Biprorulus bibax</i>	spined citrus bug
<i>Glaucias subpunctatus</i>	polished green stink bug
<i>Halyomorpha mista</i>	brown-marmorated stink bug
<i>Musgraveia sulciventris</i>	bronze orange bug
<i>Plautia stali</i>	oriental stink bug
<i>Rhynchocoris humeralis</i>	pentatomid bug
<b>Unknown Hemiptera</b>	
<i>Holopterna vulga</i>	bug
<b>Homoptera</b>	
<b>Aleyrodidae</b>	
<i>Aleurocanthus citripardus</i>	whitefly
<i>Aleurocanthus spiniferus</i>	orange spiny whitefly
<i>Aleurocanthus</i> spp.	whiteflies
<i>Aleurocanthus woglumi</i>	citrus blackfly
<i>Aleurodicus dispersus</i>	spiralling whitefly
<i>Aleurolobus marlatti</i>	Marlatt whitefly
<i>Aleuroplatus</i> sp.	whitefly
<i>Aleurothrixus floccosus</i>	woolly whitefly

<i>Aleurotuba jelinekii</i>	-
<i>Aleurotuberculatus aucubae</i>	aucuba whitefly
<i>Bemisia citricola</i>	-
<i>Dialeurodes citri</i>	citrus whitefly
<i>Dialeurodes citrifolii</i>	cloudywinged whitefly
<i>Dialeurolonga</i> sp.	-
<i>Parabemisia myricae</i>	Japanese bayberry whitefly
<i>Siphoninus phillyreae</i>	phillyrea whitefly
<b>Aphididae</b>	
<i>Aphis fabae</i>	bean aphid
<i>Aulacorthum magnoliae</i>	Japanese elder aphid
<b>Cicadellidae</b>	
<i>Asymmetrasca decedens</i>	leafhopper
<i>Circulifer opacipennis</i>	-
<i>Circulifer tenellus</i>	beet leafhopper
<i>Cuerna costalis</i>	leafhopper
<i>Edwardsiana flavescens</i>	leafhopper
<i>Empoasca bodenheimeri</i>	-
<i>Empoasca citrura</i>	green citrus leafhopper
<i>Empoasca decipiens</i>	green leafhopper
<i>Empoasca distinguenda</i>	-
<i>Empoasca fabae</i>	potato leafhopper
<i>Empoasca onukii</i>	tea green leafhopper
<i>Homalodisca coagulata</i>	glassy-winged sharpshooter
<i>Homalodisca lacerta</i>	-
<i>Jacobiasca lybica</i>	cotton jassid
<i>Nealiturus haematoceps</i>	leafhopper
<i>Penthimiola bella</i>	citrus leafhopper
<i>Scaphytopius nitridus</i>	leafhopper
<b>Cicadidae</b>	
<i>Cryptotympana facialis</i>	black cicada
<i>Meimuna opalifera</i>	elongate cicada
<b>Coccidae</b>	
<i>Ceroplastes floridensis</i>	Florida wax scale
<i>Ceroplastes japonicus</i>	pink wax scale
<i>Ceroplastes rubens</i>	red wax scale
<i>Ceroplastes rusci</i>	fig wax scale
<i>Coccus celatus</i>	-
<i>Coccus pseudomagnoliarum</i>	citricola scale
<i>Coccus viridis</i>	green scale
<i>Cribrolectanium andersoni</i>	white powdery scale
<i>Gascardia brevicauda</i>	white waxy scale
<i>Protopulvinaria pyriformis</i>	pyriform scale
<i>Pulvinaria aethiopica</i>	soft green scale
<i>Pulvinaria aurantii</i>	citrus cottony scale
<i>Pulvinaria cellulosa</i>	pulvinaria scale
<i>Saissetia citricola</i>	citrus string cottony scale
<i>Saissetia somereni</i>	-
<b>Dactylopiidae</b>	
<i>Dactylopius filamentosis</i>	-
<i>Dactylopius vastator</i>	-
<b>Diaspididae</b>	
<i>Aonidiella citrina</i>	yellow scale
<i>Chrysomphalus aonidum</i>	Florida red scale
<i>Chrysomphalus bifasciculatus</i>	brown scale
<i>Chrysomphalus dictyospermi</i>	dictyospermum scale
<i>Chrysomphalus pinnulifera</i>	false purple scale
<i>Ischnaspis longirostris</i>	black thread scale
<i>Lepidosaphes beckii</i>	purple scale
<i>Lepidosaphes gloverii</i>	Glover scale
<i>Parlatoria ziziphi</i>	black parlatoria scale

<i>Pseudaonidia duplex</i>	camphor scale
<i>Selenaspidus articulatus</i>	West Indian red scale
<i>Unaspis citri</i>	citrus snow scale
<i>Unaspis yanonensis</i>	Japanese citrus scale
<b>Flatidae</b>	
<i>Colgar peracuta</i>	-
<i>Geisha distinctissima</i>	green broad-winged planthopper
<i>Lawana conspersa</i>	green flatid planthopper
<i>Metcalfa pruinosa</i>	planthopper
<b>Fulgoridae</b>	
<i>Anzora unicolor</i>	-
<b>Margarodidae</b>	
<i>Drosicha howardi</i>	persimmon mealybug
<i>Icerya seychellarum</i>	Seychelles scale
<b>Ortheziidae</b>	
<i>Nipponorthezia ardisiae</i>	ensign scale
<b>Pseudococcidae</b>	
<i>Allococcus</i> spp.	-
<i>Ferrisia consobrina</i>	mealybug
<i>Ferrisia virgata</i>	striped mealybug
<i>Nipaecoccus vastator</i>	nipa mealybug
<i>Nipaecoccus viridis</i>	hibiscus mealybug
<i>Paracoccus burnerae</i>	spherical mealybug
<i>Planococcus kraunhiae</i>	Japanese wisteria mealybug
<i>Planococcus lilacinus</i>	citrus mealybug
<i>Planococcus minor</i>	passionvine mealybug
<i>Pseudococcus citriculus</i>	smaller citrus mealybug
<i>Pseudococcus communus</i>	-
<i>Pseudococcus filamentosus</i>	mealybug
<i>Rastrococcus spinosus</i>	mealybug
<i>Rhizoecus kondonis</i>	Kondo mealybug
<b>Psyllidae</b>	
<i>Diaphorina citri</i>	citrus psyllid
<i>Trioza erytrae</i> [vector]	citrus psyllid
<b>Ricaniidae</b>	
<i>Scolypopa</i> sp.	-
<b>Tropiduchidae</b>	
<i>Tambinia</i> sp.	-
<b>Hymenoptera</b>	
<b>Aphelinidae</b>	
<i>Aphytis africanus</i> [Animals Biosecurity]	-
<i>Aphytis holoxanthus</i> [Animals Biosecurity]	-
<i>Aphytis lepidosaphes</i> [Animals Biosecurity]	-
<i>Aphytis lingnanensis</i> [Animals Biosecurity]	-
<i>Aphytis melinus</i> [Animals Biosecurity]	-
<i>Azotus platensis</i> [Animals Biosecurity]	-
<i>Cales noacki</i> [Animals Biosecurity]	-
<i>Cales orchamoplati</i> [Animals Biosecurity]	-
<i>Centrodora penthimiae</i> [Animals Biosecurity]	-
<i>Coccophagus caridei</i> [Animals Biosecurity]	-
<i>Coccophagus pulvinariae</i> [Animals Biosecurity]	-
<i>Encarsia ectophaga</i> [Animals Biosecurity]	-
<i>Encarsia lahorensis</i> [Animals Biosecurity]	-
<i>Encarsia lounsburyi</i> [Animals Biosecurity]	-
<i>Encarsia opulenta</i> [Animals Biosecurity]	-
<i>Encarsia smithi</i> [Animals Biosecurity]	-
<i>Eretmocerus serius</i> [Animals Biosecurity]	-
<i>Marietta connecta</i> [Animals Biosecurity]	-
<i>Marietta leopardina</i> [Animals Biosecurity]	-
<b>Braconidae</b>	
<i>Apanteles aristotalilae</i> [Animals Biosecurity]	-

<i>Biosteres longicaudatus</i> [Animals Biosecurity]	-
<i>Pholetesor ornigis</i> [Animals Biosecurity]	-
<b>Encyrtidae</b>	
<i>Anicetus beneficus</i> [Animals Biosecurity]	-
<i>Comperiella bifasciata</i> [Animals Biosecurity]	-
<i>Habrolepis rouxi</i> [Animals Biosecurity]	-
<i>Leptomastix dactylopii</i> [Animals Biosecurity]	parasitic wasp
<i>Metaphycus helvolus</i> [Animals Biosecurity]	-
<i>Metaphycus luteolus</i> [Animals Biosecurity]	-
<i>Metaphycus stanleyi</i> [Animals Biosecurity]	-
<i>Metaphycus varius</i> [Animals Biosecurity]	-
<i>Psyllaephagus pulvinatus</i> [Animals Biosecurity]	-
<b>Eulophidae</b>	
<i>Aprostocetus ceroplastae</i> [Animals Biosecurity]	-
<i>Elachertus fenestratus</i> [Animals Biosecurity]	-
<i>Tamarixia radiatus</i> [Animals Biosecurity]	-
<b>Eupelmidae</b>	
<i>Anastatus biproruli</i> [Animals Biosecurity]	-
<b>Eurytomidae</b>	
<i>Bruchophagus fellis</i>	citrus gall midge
<b>Formicidae</b>	
<i>Acromyrmex octospinosus</i>	leaf-cutting ant
<i>Anoplolepis braunsi</i> [Animals Biosecurity]	-
<i>Anoplolepis custodiens</i>	ant
<i>Anoplolepis steingroeveri</i> [Animals Biosecurity]	black ant
<i>Atta cephalotes</i>	leaf-cutting ant
<i>Atta sexdens</i>	-
<i>Atta texana</i>	Texas leaf-cutting ant
<i>Camponotus rufoglaucus</i>	-
<i>Crematogaster castanea</i>	-
<i>Crematogaster liengmei</i>	-
<i>Crematogaster peringueyi</i> [Animals Biosecurity]	cocktail ant
<i>Lepisiota capensis</i> [Animals Biosecurity]	-
<i>Myrmecaria natalensis</i>	-
<i>Pheidole tenuinodis</i>	ant
<i>Polyrhachis schistaceus</i>	ant
<i>Solenopsis invicta</i> [Animals Biosecurity]	red imported fire ant
<i>Tapinoma arnoldi</i>	-
<i>Technomyrmex albipes foreli</i> [Animals Biosecurity]	-
<b>Mymaridae</b>	
<i>Chaetomyrmac gracile</i> [Animals Biosecurity]	-
<i>Chaetomyrmac lepidum</i> [Animals Biosecurity]	-
<i>Gonatocerus incomptus</i> [Animals Biosecurity]	-
<b>Platygasteridae</b>	
<i>Amitus hesperidum</i> [Animals Biosecurity]	-
<i>Amitus spiniferus</i> [Animals Biosecurity]	-
<i>Fidiobia citri</i> [Animals Biosecurity]	-
<b>Scelionidae</b>	
<i>Trissolcus oeneus</i> [Animals Biosecurity]	-
<i>Trissolcus oenone</i> [Animals Biosecurity]	-
<i>Trissolcus ogyges</i> [Animals Biosecurity]	-
<b>Signiphoridae</b>	
<i>Signiphora fax</i> [Animals Biosecurity]	-
<i>Signiphora flavella</i> [Animals Biosecurity]	-
<i>Signiphora perpauca</i> [Animals Biosecurity]	-
<b>Trichogrammatidae</b>	
<i>Trichogramma platneri</i> [Animals Biosecurity]	-
<b>Vespidae</b>	
<i>Polistes</i> spp. [Animals Biosecurity]	paper wasps
<b>Isoptera</b>	
<b>Termitidae</b>	

<i>Odontotermes lokanandi</i>	termite
<b>Lepidoptera</b>	
<b>Arctiidae</b>	
<i>Lemyra imparilis</i>	mulberry tiger moth
<b>Blastobasidae</b>	
<i>Holcocera iceryaeella</i>	-
<b>Cosmopterigidae</b>	
<i>Pyroderces rileyi</i>	pink scavenger caterpillar
<b>Geometridae</b>	
<i>Anacamptodes fragilaria</i>	koa haole looper
<i>Ascotis selenaria reciprocaria</i>	citrus looper
<i>Gymnoscelis rufifasciata</i>	geometrid moth
<i>Hyposidra talaca</i>	-
<b>Gracillariidae</b>	
<i>Phyllocnistis citrella</i>	citrus leafminer
<b>Hepialidae</b>	
<i>Endoclita excrescens</i>	Japanese swift moth
<i>Endoclita sinensis</i>	-
<b>Lycaenidae</b>	
<i>Virachola isocrates</i>	pomegranate butterfly
<b>Lymantriidae</b>	
<i>Orgyia vetusta</i>	western tussock moth
<b>Metarbelidae</b>	
<i>Indarbela tetraonis</i>	stem borer
<b>Noctuidae</b>	
<i>Arcte coerulea</i>	fruit-piercing moth
<i>Eudocima fullonia</i>	fruit-piercing moth
<i>Helicoverpa assulta</i>	cape gooseberry budworm
<i>Helicoverpa punctigera</i>	oriental tobacco budworm
<i>Tiracola plagiata</i>	banana fruit caterpillar
<i>Xylomyges curialis</i>	noctuid moth
<b>Nymphalidae</b>	
<i>Charaxes jasius</i>	nymphalid butterfly
<b>Oecophoridae</b>	
<i>Psorosticha melanocrepida</i>	citrus leafroller
<i>Psorosticha zizyphi</i>	citrus leafroller
<i>Stathmopoda auriferella</i>	apple heliodinid
<b>Papilionidae</b>	
<i>Papilio aegeus aegeus</i>	-
<i>Papilio anactus</i>	small citrus butterfly
<i>Papilio cresphontes</i>	orange dog
<i>Papilio dardanus cenea</i>	-
<i>Papilio demodocus</i>	orange dog
<i>Papilio demoleus demoleus</i>	-
<i>Papilio helenus nicconicolens</i>	-
<i>Papilio machaon asiatica</i>	-
<i>Papilio memnon</i>	citrus swallowtail
<i>Papilio memnon thunbergii</i>	-
<i>Papilio nireus lyaeus</i>	-
<i>Papilio polytes polytes</i>	-
<i>Papilio protenor demetrius</i>	-
<i>Papilio xuthus</i>	citrus swallowtail
<i>Papilio zelicaon</i>	anise swallowtail
<b>Psychidae</b>	
<i>Eumeta hardenbergi</i>	-
<i>Eumeta japonica</i>	-
<i>Eumeta minuscula</i>	tea bagworm
<i>Eumeta moddermanni</i>	-
<i>Hyalarcta huebneri</i>	leaf case moth
<b>Pyralidae</b>	
<i>Apomyelois ceratoniae</i>	date pyralid

<b>Tortricidae</b>	
<i>Adoxophyes</i> sp.	-
<i>Amorbia cuneana</i>	leafroller
<i>Archips argyrospilus</i>	fruit tree leafroller
<i>Archips machlopiis</i>	leafroller
<i>Archips occidentalis</i>	leafroller
<i>Archips rosanus</i>	rose leafroller
<i>Argyrotaenia citrana</i>	orange tortrix
<i>Cacoecimorpha pronubana</i>	carnation leafroller
<i>Cryptophlebia batrachopa</i>	-
<i>Cryptophlebia leucotreta</i>	false codling moth
<i>Homona magnanima</i>	oriental tea tortrix
<i>Isotenes miserana</i>	orange fruitborer
<i>Platynota stultana</i>	omnivorous leafroller
<i>Tortrix capensana</i>	tortricid moth
<b>Yponomeutidae</b>	
<i>Prays citri</i>	citrus flower moth
<i>Prays parilis</i>	citrus flower moth
<b>Neuroptera</b>	
<b>Chrysopidae</b>	
<i>Chrysopa oculata</i> [Animals Biosecurity]	-
<b>Coniopterygidae</b>	
<i>Coniopteryx vicina</i> [Animals Biosecurity]	-
<i>Conwentzia barretti</i> [Animals Biosecurity]	-
<b>Orthoptera</b>	
<b>Acrididae</b>	
<i>Zonocerus elegans</i>	elegant grasshopper
<b>Gryllidae</b>	
<i>Ornebius kanetataki</i>	cricket
<b>Tettigoniidae</b>	
<i>Caedicia</i> sp.	-
<i>Holochlora japonica</i>	Japanese broadwinged katydid
<i>Microcentrum retinerve</i>	smaller angular-winged katydid
<i>Scudderia furcata</i>	fork-tailed bush katydid
<b>Psocoptera</b>	
<b>Archipsocidae</b>	
<i>Archipsocus</i> sp.	bark louse
<b>Thysanoptera</b>	
<b>Aeolothripidae</b>	
<i>Franklinothrips vespiformis</i> [Animals Biosecurity]	-
<b>Thripidae</b>	
<i>Chaetanaphothrips orchidii</i>	banana rust thrips
<i>Leptothrips mali</i>	black hunter thrips
<i>Scirtothrips aurantii</i>	citrus thrips
<i>Scirtothrips citri</i>	citrus thrips
<i>Scirtothrips dorsalis</i>	chilli thrips
<i>Scirtothrips mangiferae</i>	mango thrips
<i>Scolothrips sexmaculatus</i> [Animals Biosecurity]	-
<i>Taeniothrips kellyanus</i>	-
<i>Taeniothrips</i> sp.	-
<i>Thrips coloratus</i>	thrips
<i>Thrips flavus</i>	flower thrips
<i>Thrips palmi</i>	palm thrips
<b>Unknown Insecta</b>	
<b>Unknown Insecta</b>	
<i>Cosmophyllum pallidulum</i>	-
<b>Mite</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Acaridae</b>	

<i>Thyreophagus entomophagus italicus</i> [Animals Biosecurity]	-
<b>Anystidae</b>	
<i>Anystis agilis</i> [Animals Biosecurity]	-
<b>Eriophyidae</b>	
<i>Aculops pelekassi</i>	eriphyid mite
<i>Tegolophus australis</i>	brown citrus mite
<b>Phytoseiidae</b>	
<i>Amblyseius addoensis</i> [Animals Biosecurity]	-
<i>Amblyseius citri</i> [Animals Biosecurity]	-
<i>Amblyseius swirskii</i> [Animals Biosecurity]	-
<i>Euseius hibisci</i> [Animals Biosecurity]	-
<i>Euseius scutalis</i> [Animals Biosecurity]	-
<i>Euseius stipulatus</i> [Animals Biosecurity]	-
<i>Euseius tularensis</i> [Animals Biosecurity]	-
<i>Iphiseius degenerans</i> [Animals Biosecurity]	predatory mite
<i>Typhlodromus athiasae</i> [Animals Biosecurity]	-
<b>Stigmaeidae</b>	
<i>Agistemus africanus</i> [Animals Biosecurity]	-
<i>Agistemus tranatalensis</i> [Animals Biosecurity]	-
<i>Eryngiopus siculus</i> [Animals Biosecurity]	-
<b>Tarsonemidae</b>	
<i>Tarsonemus cryptocephalus</i> [Animals Biosecurity]	-
<b>Tenuipalpidae</b>	
<i>Brevipalpus chilensis</i>	false spider mite
<i>Brevipalpus lewisi</i>	bunch mite
<i>Brevipalpus obovatus</i>	privet mite
<i>Tenuipalpus emeticae</i> [Animals Biosecurity]	-
<i>Tuckerella ornata</i>	-
<i>Ultratenuipalpus gonianaensis</i>	tenuipalpid mite
<b>Tetranychidae</b>	
<i>Calacarus citrifolii</i>	clover mite
<i>Eotetranychus kankitus</i>	tetranychid mite
<i>Eotetranychus lewisi</i>	big beaked plum mite
<i>Eotetranychus yumensis</i>	Yumi spider mite
<i>Eutetranychus africanus</i>	tetranychid mite
<i>Eutetranychus banksi</i>	Texas citrus mite
<i>Eutetranychus orientalis</i>	pear leaf blister mite
<i>Oligonychus mangiferus</i>	mango spider mite
<i>Tetranychus kanzawai</i>	kanzawa mite
<b>Tuckerellidae</b>	
<i>Tuckerella knorri</i>	hawthorn spider mite
<b>Spider</b>	
<b>Arachnida</b>	
<b>Araneae</b>	
<b>Clubionidae</b>	
<i>Cheiracanthium mildei</i> [Animals Biosecurity]	-
<b>Theridiidae</b>	
<i>Theridion</i> sp. [Animals Biosecurity]	-
<b>Mollusc</b>	
<b>Gastropoda</b>	
<b>Stylommatophora</b>	
<b>Achatinidae</b>	
<i>Achatina immaculata</i>	-
<i>Lissachatina immaculata</i>	snail
<b>Bradybaenidae</b>	
<i>Acusta despecta sieboldiana</i>	snail
<b>Subulinidae</b>	
<i>Rumina decollata</i>	snail

<b>Urocyclidae</b>	
<i>Urocyclus flavescens</i>	-
<i>Urocyclus kirkii</i>	-
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Diaporthales</b>	
<b>Valsaceae</b>	
<i>Diaporthe rudis</i> (anamorph <i>Phomopsis rudis</i> )	phomopsis canker
<b>Dothideales</b>	
<b>Elsinoaceae</b>	
<i>Elsinoe australis</i>	sweet orange scab
<b>Capnodiaceae</b>	
<i>Capnodium citri</i>	sooty mould
<b>Didymosphaeriaceae</b>	
<i>Didymosphaeria</i> sp.	--
<b>Mycosphaerellaceae</b>	
<i>Guignardia citricarpa</i> (anamorph <i>Phyllosticta citricarpa</i> ) [black spot strain]	citrus black spot
<i>Mycosphaerella citri</i> (anamorph <i>Stenella citri-grisea</i> )	rind blotch
<i>Mycosphaerella horii</i>	greasy spot
<b>Patellariales</b>	
<b>Patellariaceae</b>	
<i>Rhytidhysteron rufulum</i>	--
<b>Saccharomycetales</b>	
<b>Saccharomycetaceae</b>	
<i>Debaryomyces hansenii</i>	-
<i>Galactomyces citri-aurantii</i> (anamorph <i>Geotrichum citri-aurantii</i> )	sour rot
<b>Basidiomycota: Basidiomycetes</b>	
<b>Boletales</b>	
<b>Coniophoraceae</b>	
<i>Coniophora eremophila</i>	brown wood rot
<b>Basidiomycota: Teliomycetes</b>	
<b>Septobasidiales</b>	
<b>Septobasidiaceae</b>	
<i>Septobasidium pseudopedicellatum</i>	felt fungus
<b>Mitosporic Fungi</b>	
<b>Unknown Mitosporic Fungi</b>	
<b>Unknown Mitosporic Fungi</b>	
<i>Sphaceloma fawcettii</i> var. <i>scabiosa</i>	-
<b>Mitosporic Fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Macrophoma mantegazziana</i>	-
<i>Phoma erratica</i> var. <i>mikan</i>	--
<i>Phoma tracheiphila</i>	mal secco
<i>Phomopsis</i> sp.	rot
<i>Septoria</i> spp.	-
<i>Sphaeropsis tumefaciens</i>	stem gall
<b>Unknown Coelomycetes</b>	
<b>Unknown Coelomycetes</b>	
<i>Aschersonia placenta</i> [Animals Biosecurity]	--
<i>Gloeosporium foliicolum</i>	fruit rot
<b>Mitosporic Fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	
<b>Dematiaceae</b>	
<i>Alternaria limicola</i>	-
<i>Alternaria pellucida</i>	--
<i>Cercospora microsora</i>	-
<i>Phaeoramularia angolensis</i>	cercospora spot

<i>Stemphylium rosarium</i>	--
<i>Ulocladium obovoideum</i>	ulocladium rot
<b>Unknown Hyphomycetes</b>	
<b>Unknown Hyphomycetes</b>	
<i>Aureobasidium</i> sp.	-
<i>Hirsutella thompsonii</i> [Animals Biosecurity]	--
<i>Isaria</i> sp. [Animals Biosecurity]	-
<i>Oidium tingitaninum</i>	powdery mildew
<i>Sporobolomyces roseus</i>	--
<i>Stenella</i> sp.	--
<b>Zygomycota: Zygomycetes</b>	
<b>Glomales</b>	
<b>Glomaceae</b>	
<i>Glomus etunicatum</i> [Animals Biosecurity]	--
<b>Mucorales</b>	
<b>Syncephalastraceae</b>	
<i>Syncephalastrum racemosum</i>	--
<b>Bacterium</b>	
<b>Bacterium family unknown</b>	
<i>Liberobacter africanum</i>	citrus greening bacterium
<i>Liberobacter asiaticum</i>	citrus greening bacterium
<i>Liberobacter</i> sp.	citrus greening bacterium
<i>Spiroplasma citri</i>	citrus stubborn
<b>Pseudomonadaceae</b>	
<i>Burkholderia cepacia</i>	sour skin
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	citrus canker
<i>Xanthomonas campestris</i> pv. <i>aurantifolii</i>	-
<i>Xanthomonas campestris</i> pv. <i>citrumelo</i>	citrus bacterial spot
<i>Xylella fastidiosa</i>	Pierce's disease
<i>Xylella fastidiosa</i> pv. <i>citri</i>	variegated chlorosis of citrus
<b>Virus</b>	
Indian citrus mosaic badnavirus	-
citrus cachexia viroid	-
citrus chlorotic dwarf	-
citrus infectious variegation ilarvirus	-
citrus infectious variegation ilarvirus [crinkly leaf strain]	-
citrus leaf rugose ilarvirus	-
citrus leathery leaf virus	-
citrus leprosis rhabdovirus	-
citrus mosaic virus	-
citrus ringspot virus	-
citrus tatter leaf capillovirus	-
citrus tristeza closterovirus [strains not in New Zealand]	-
citrus variable viroid	-
citrus viroids (groups I-IV)	-
citrus yellow mosaic badnavirus	-
citrus yellow mottle virus	-
dwarfing factor viroid	-
navel orange infectious mottling virus	-
satsuma dwarf nepovirus	-
satsuma dwarf nepovirus [Natsudaikai dwarf strain]	-
xyloporosis viroid	-
yellow vein clearing of lemon	-
<b>Phytoplasma</b>	
<i>Candidatus</i> Phytoplasma <i>aurantifolia</i>	witches' broom phytoplasma
rubbery wood	-

**Disease of unknown aetiology**

Australian citrus dieback	-
blind pocket	-
bud union disease	-
citrus blight disease	-
citrus fatal yellows	-
citrus impietratura disease	-
citrus sunken vein disease	-
concave gum	-
crisacortis	-
gum pocket	-
gummy bark	-
kassala disease	-
lemon sieve tube necrosis	-
shell bark of lemons	-
zonate chlorosis	-

## Inspection, Testing and Treatment Requirements for *Poncirus*\*

ORGANISM TYPES	MAF ACCEPTABLE METHODS
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions).
<b>Mites</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions).
<b>Fungus</b>	Country freedom OR growing season inspection for symptom expression.
<b>Bacterium</b>	
<i>Burkholderia cepacia</i>	Growing season inspection for symptom expression.
<i>Liberobacter africanum</i>	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.
<i>Liberobacter asiaticum</i>	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.
<i>Spiroplasma citri</i>	Country freedom/shoot tip grafting. Graft inoculated sweet orange, 27 to 32°C. Bioassay = culture petiole new flush tissue. Collect tissue after several days at hot temperature (> 30°C) and incubate cultures at 32°C.
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xanthomonas campestris</i> pv. <i>aurantifolii</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xanthomonas campestris</i> pv. <i>citrumelo</i>	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR suitable citrus indicator.
<i>Xylella fastidiosa</i>	Country freedom/shoot tip grafting bioassay/ PCR/ELISA OR suitable citrus indicator.
<i>Xylella fastidiosa</i> pv. <i>citri</i>	Country freedom/shoot tip grafting bioassay PCR/ELISA OR suitable citrus indicator.
<b>Virus</b>	
citrus chlorotic dwarf	Country freedom OR graft inoculated rough lemon at cool temperatures 18 to 25°C.
citrus infectious variegation ilarvirus	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow indicators at cool temperatures 18 to 25°C.
citrus infectious variegation ilarvirus [crinkly leaf strain]	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow indicators at cool temperatures 18 to 25°C.
citrus leaf rugose ilarvirus	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators at cool temperatures 18 to 25°C.
citrus leathery leaf virus	Country freedom OR Rangpur lime. Grow indicators at cool temperatures 18 to 25°C.
citrus leprosis rhabdovirus	Country freedom OR graft inoculated sweet orange. Grow indicators at cool temperatures 18 to 25°C.
citrus mosaic virus	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.
citrus ringspot virus	Country freedom OR graft inoculated dweet tangor, sweet orange, mandarin (Parson's Special). Grow indicators at cool temperatures 18 to 25°C.
citrus tatter leaf capillovirus	Country freedom OR graft inoculated Rusk citrange, rough lemon, <i>Citrus excelsa</i> , citrange (Troyer). Grow indicators at cool temperatures 18 to 25°C.
citrus tristeza closterovirus [strains not in New Zealand]	Country freedom OR ELISA, graft inoculated Mexican lime, sour orange and <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
citrus yellow mosaic badnavirus	Country freedom OR graft inoculated sweet orange, sour orange and citron.
citrus yellow mottle virus	Country freedom OR other suitable test.
Indian citrus mosaic badnavirus	Country freedom OR graft inoculated sweet orange at hot temperature 27 to 32°C.
navel orange infectious mottling virus	Country freedom OR graft inoculated Satsums. Grow indicators at cool temperatures 18 to 25°C.
satsuma dwarf nepovirus	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.

<b>ORGANISM TYPES</b>	<b>MAF ACCEPTABLE METHODS</b>
satsuma dwarf nepovirus [Natsudaikai dwarf strain]	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.
yellow vein clearing of lemon	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators at cool temperatures 18 to 25°C.
<b>Viroid</b>	
citrus cachexia viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
citrus variable viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
citrus viroids (groups I-IV)	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
dwarfing factor viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
xyloporosis viroid	Country freedom OR SPAGE and PCR on graft inoculated citron extract or mandarin (Parson's Special). Grow Citron at hot temperature 27 to 32°C.
<b>Disease of unknown aetiology</b>	
Australian citrus dieback	Country freedom OR other suitable test
blind pocket	Country freedom OR graft inoculated dweet tangor, sweet orange or <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
bud union disease	Country freedom OR other suitable test
citrus blight disease	None (cuttings collected from blight free area). Inspect source tree after 2 years before releasing from quarantine.
citrus fatal yellows	Country freedom OR graft inoculated <i>Citrus macrophylla</i> .
citrus impietratura disease	Country freedom OR graft inoculated dweet tangor or sweet orange. Growth indicators at cool temperatures 18 to 25°C.
citrus sunken vein disease	Country freedom OR other suitable test.
concave gum	Country freedom OR graft inoculated dweet tangor, sweet orange or <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
crisacortis	Country freedom OR graft inoculated dweet tangor, sweet orange or <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
gum pocket	Country freedom OR graft inoculated dweet tangor, sweet orange or <i>Citrus excelsa</i> . Grow indicators at cool temperatures 18 to 25°C.
gummy bark	Country freedom OR SPAGE of graft inoculated citron extract. Grow citron at hot temperature 27 to 32°C.
kassala disease	Country freedom, cuttings collected from kassala free area.
lemon sieve tube necrosis	Country freedom OR other suitable test.
shell bark of lemons	Country freedom OR other suitable test.
zonate chlorosis	Country freedom, cuttings collected from kassala free area.
<b>Phytoplasma</b>	
<i>Candidatus</i> phytoplasma aurantifolia	Country freedom OR graft inoculated lime. Grow indicators at cool temperatures 18 to 25°C.
rubbery wood	Country freedom OR graft inoculated sweet orange or lemon. Grow citron at hot temperature 27 to 32°C.

\* Country freedom is accepted as equivalence to a treatment.

#### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. With prior notification, MAF will accept other internationally recognised testing methods.

## *Populus*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Populus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA

**Quarantine Pests:** *Marssonina* spp.; Uredinales; *Xylella fastidiosa*; *Phytophthora ramorum*; virus diseases

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Prunus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **1. Type of *Prunus* nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

*Prunus* can be imported into Level 2 post entry quarantine from MAF-accredited facilities, or into Level 3 post entry quarantine from non-accredited facilities.

### **2. Pests of *Prunus***

Refer to the pest list.

### **3. Entry conditions for:**

#### **3.1 *Prunus* cuttings and tissue culture from offshore MAF-accredited facilities in any country**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. The operator of the accredited facility must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Prunus*. Refer to the “*Prunus* Inspection, Testing and Treatment Requirements”.

#### **(i) Documentation**

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Prunus* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

#### **(ii) Phytosanitary requirements**

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Prunus* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section [cuttings only] and by providing the following additional declarations to the phytosanitary certificate:

"The *Prunus* cuttings have been:

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification."

(iv) Post-entry quarantine

**PEQ:** All *Prunus* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:**

Upon arrival cuttings will be dipped in 1% sodium hypochlorite for 2 minutes [cuttings only].

The nursery stock will be grown for a minimum period of 9 months in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. Nine months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

**Alternatively:**

Following 6 months of continuous active growth in level 2 post-entry quarantine, provided all required testing has been completed, no regulated organisms have been detected and based on a direction from the Inspector, the plants can be moved to a L1 post-entry quarantine facility for an additional 6 months of active growth. Upon completion of the 6 months in L2 and 6 months in L1, the plants can be given biosecurity clearance.

**3.2 *Prunus* cuttings and tissue culture from from non-accredited facilities in any country**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Prunus* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Prunus* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section [cuttings only]. No additional declarations are required.

(iv) Post-entry quarantine

**PEQ:** All *Prunus* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** Upon arrival cuttings will be dipped in 1% sodium hypochlorite for 2 minutes [cuttings only]. The nursery stock will be grown for a minimum period of 24 months in post-entry quarantine and will be inspected, treated and/or tested for regulated pests as specified in the “Inspection, Testing and Treatment Requirements for *Prunus*”, at the expense of the importer. Twenty four months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Prunus*

## REGULATED PESTS (actionable)

### Insect

#### Insecta

##### Coleoptera

###### Bostrichidae

*Apate monachus*

black borer

###### Buprestidae

*Chrysobothris mali*

Pacific flatheaded borer

*Sphenoptera dadkhani*

flatheaded borer

*Sphenoptera lafertei*

flatheaded peach tree borer

###### Cerambycidae

*Aeolesthes holosericea*

cherry stem borer

*Aeolesthes sarta*

quetta borer

###### Chrysomelidae

*Chaetocnema confinis*

sweet potato flea beetle

*Diabrotica speciosa*

cucumber beetle

*Monolepta australis*

red-shouldered leaf beetle

*Prasoidea sericea*

leaf beetle

###### Curculionidae

*Eremnus atratus*

black weevil

*Eremnus cerealis*

western province grain worm

*Eremnus setulosus*

grey weevil

*Naupactus xanthographus*

fruit tree weevil

*Orthorhinus cylindrirostris*

elephant weevil

*Otiorhynchus armadillo*

weevil

###### Scolytidae

*Scolytus japonicus*

Japanese bark beetle

*Scolytus mali*

larger shot-hole borer

*Scolytus rugulosus*

shot-hole borer

*Xyleborus dispar*

ambrosia beetle

*Xyleborus pfeili*

bark beetle

*Xyleborus rubricollis*

black twig borer

*Xyleborus xylographus*

pin-hole borer

*Xylosandrus crassiusculus*

bark beetle

#### Diptera

##### Cecidomyiidae

*Resseliella oculiperda*

red bud borer

##### Muscidae

*Atherigona orientalis*

muscid fly

##### Syrphidae

*Melanostoma agrolas*

-

##### Tephritidae

*Bactrocera cucurbitae*

melon fly

*Ceratitis capitata*

Mediterranean fruit fly

#### Hemiptera

##### Coreidae

*Amblypelta cocophaga*

coconut nut fall bug

*Amblypelta nitida*

fruit-spotting bug

*Leptoglossus occidentalis*

coreid bug

##### Lygaeidae

*Macchiademus diplopterus*

grain chinch bug

*Nysius vinitor*

Rutherglen bug

<i>Oxycarenus arctatus</i>	coon bug
<i>Oxycarenus exitiotus</i>	fruit tree stinkbug
<b>Miridae</b>	
<i>Creontiades dilutus</i>	green mirid
<i>Lygus cerasi</i>	-
<i>Lygus elisus</i>	pale legume bug
<i>Lygus lineolaris</i>	tarnished plant bug
<b>Pentatomidae</b>	
<i>Acrosternum hilare</i>	green stink bug
<i>Antestiopsis orbitalis</i>	-
<i>Euschistus servus</i>	brown stink bug
<i>Tessaratoma papillosa</i>	litchee stink bug
<b>Homoptera</b>	
<b>Aleyrodidae</b>	
<i>Parabemisia myricae</i>	Japanese bayberry whitefly
<b>Aphididae</b>	
<i>Aphis spiraeicola</i> [vector]	spirea aphid
<i>Brachycaudus amygdalinus</i>	short tailed almond aphid
<i>Brachycaudus cardui</i>	thistle aphid
<i>Brachycaudus schwartzi</i>	aphid
<i>Brachycaudus tragopogonis</i>	-
<i>Dysaphis plantaginea</i>	rosy apple aphid
<i>Hyalopterus amygdali</i>	peach aphid
<i>Hyalopterus pruni</i>	mealy plum aphid
<i>Hysteroneura setariae</i>	rusty plum aphid
<i>Myzus varians</i>	peach-potato aphid
<i>Pterochloroides persicae</i>	giant brown bark aphid
<b>Asterolecaniidae</b>	
<i>Asterolecanium pustulans</i>	oleander pit scale
<b>Cicadellidae</b>	
<i>Edwardsiana rosae</i>	rose leafhopper
<b>Coccidae</b>	
<i>Ceroplastes floridensis</i>	Florida wax scale
<i>Ceroplastes japonicus</i>	pink wax scale
<i>Ceroplastes rubens</i>	red wax scale
<i>Eulecanium prunosum</i>	frosted scale
<i>Parthenolecanium persicae</i>	European peach scale
<i>Pulvinaria innumerabilis</i>	cottony maple scale
<i>Sphaerolecanium prunastri</i>	globose scale
<b>Diaspididae</b>	
<i>Aonidiella citrina</i>	yellow scale
<i>Aonidiella orientalis</i>	oriental yellow scale
<i>Aspidiotus destructor</i>	coconut scale
<i>Chrysomphalus aonidium</i>	Florida red scale
<i>Chrysomphalus dictyospermi</i>	dictyospermum scale
<i>Diaspidiotus africanus</i>	grey scale
<i>Diaspidiotus ancylus</i>	Putnam scale
<i>Epidiaspis leperii</i>	Italian pear scale
<i>Parlatoria oleae</i>	olive scale
<i>Pseudaulacaspis pentagona</i>	white peach scale
<b>Flatidae</b>	
<i>Metcalfa pruinosa</i>	planthopper
<b>Margarodidae</b>	
<i>Icerya seychellarum</i>	Seychelles scale
<b>Membracidae</b>	
<i>Ceresa alta</i>	-
<i>Ceresa bubalus</i>	buffalo tree hopper
<i>Stictocephala inermis</i>	-
<b>Pseudococcidae</b>	
<i>Maconellicoccus hirsutus</i>	pink hibiscus mealybug
<i>Pseudococcus maritimus</i>	grape mealybug

<b>Hymenoptera</b>	
<b>Bethylidae</b>	
<i>Goniozus</i> sp.	-
<b>Eulophidae</b>	
<i>Colpoclypeus florus</i>	-
<b>Ichneumonidae</b>	
<i>Phytodietus celcissimus</i>	-
<b>Trichogrammatidae</b>	
<i>Trichogrammatomyia tortricis</i>	-
<b>Isoptera</b>	
<b>Kalotermitidae</b>	
<i>Bifiditermes beelsoni</i>	-
<b>Rhinotermitidae</b>	
<i>Coptotermes heimi</i>	-
<i>Heterotermes indicola</i>	-
<b>Termitidae</b>	
<i>Microtermes unicolor</i>	termite
<i>Odontotermes lokanandi</i>	termite
<b>Lepidoptera</b>	
<b>Arctiidae</b>	
<i>Hyphantria cunea</i>	fall webworm
<b>Choreutidae</b>	
<i>Choreutis pariana</i>	apple leaf skeletonizer
<b>Cossidae</b>	
<i>Cossus cossus</i>	goat moth
<b>Gelechiidae</b>	
<i>Anarsia lineatella</i>	peach twig borer
<i>Recurvaria nanella</i>	lesser bud moth
<i>Recurvaria syriactis</i>	bud moth
<b>Geometridae</b>	
<i>Alsophila pometaria</i>	fall cankerworm
<i>Operophtera brumata</i>	winter moth
<b>Gracillariidae</b>	
<i>Phyllonorycter cerasicolella</i>	leafminer
<b>Lasiocampidae</b>	
<i>Malacosoma californicum fragile</i>	tent caterpillar
<i>Malacosoma disstria</i>	forest tent caterpillar
<b>Limacodidae</b>	
<i>Doratifera vulnerans</i>	mottled cup moth
<i>Latoia latistriga</i>	plum slug
<b>Lymantriidae</b>	
<i>Orgyia antiqua</i>	rusty tussock moth
<i>Orgyia gonostigma</i>	vapourer moth
<b>Metarbelidae</b>	
<i>Indarbela quadrinotata</i>	wood-borer moth
<b>Noctuidae</b>	
<i>Alabama argillacea</i>	cotton leafworm
<i>Mamestra brassicae</i>	cabbage moth
<i>Peridroma saucia</i>	variegated cutworm
<i>Schizura concinna</i>	redhumped caterpillar
<i>Spodoptera frugiperda</i>	fall armyworm
<i>Xestia c-nigrum</i>	spotted cutworm
<b>Notodontidae</b>	
<i>Datana ministra</i>	yellow-necked caterpillar
<b>Oecophoridae</b>	
<i>Cryptophasa melanostigma</i>	fruit tree borer
<i>Maroga melanostigma</i>	fruit tree borer
<b>Papilionidae</b>	
<i>Papilio rutulus</i>	-
<b>Pyralidae</b>	
<i>Conogethes punctiferalis</i>	yellow peach moth
<i>Euzophera bigella</i>	quince moth

<i>Euzophera semifuneralis</i>	American plum borer
<i>Ostrinia nubilalis</i>	European corn borer
<b>Saturniidae</b>	
<i>Antheraea polyphemus</i>	emperor moth
<b>Sesiidae</b>	
<i>Synanthedon exitiosa</i>	peach tree borer
<i>Synanthedon pictipes</i>	lesser peach tree borer
<b>Sphingidae</b>	
<i>Sphinx drupiferarum</i>	plum sphinx
<b>Tortricidae</b>	
<i>Acleris minuta</i>	yellow headed fireworm
<i>Adoxophyes orana</i>	reticulated tortrix
<i>Archips argyrospilus</i>	fruit tree leafroller
<i>Archips oporanus</i>	fruit tree tortrix
<i>Archips podanus</i>	fruit tree tortrix
<i>Archips purpuranus</i>	-
<i>Archips rosanus</i>	rose leafroller
<i>Argyrotaenia citrana</i>	orange tortrix
<i>Argyrotaenia ljugiana</i>	grey red-barred tortrix
<i>Argyrotaenia velutinana</i>	red-banded leafroller
<i>Choristoneura albaniana</i>	leafroller
<i>Choristoneura rosaceana</i>	oblique-banded leafroller
<i>Cryptoptila immersana</i>	ivy leafroller
<i>Cydia caryana</i>	hickory shuckworm
<i>Cydia packardi</i>	cherry fruitworm
<i>Cydia prunivora</i>	lesser appleworm
<i>Epichoristodes acerbella</i>	South African carnation worm
<i>Hedya dimidioalba</i>	green budworm
<i>Pandemis cerasana</i>	barred fruit tree tortrix
<i>Pandemis heparana</i>	dark fruit tree tortrix
<i>Platynota flavedana</i>	apple bud moth
<i>Platynota idaeusalis</i>	tufted apple bud moth
<i>Proeulia auraria</i>	grapevine leafroller
<i>Proeulia chrysopteris</i>	grapevine leaf-rolling tortricid
<i>Sparganothis reticulatana</i>	leafroller
<i>Spilonota ocellana</i>	eyespotted bud moth
<i>Tortrix capensana</i>	tortricid moth
<i>Tortrix cinderella</i>	-
<b>Orthoptera</b>	
<b>Acrididae</b>	
<i>Acanthacris ruficornis</i>	-
<i>Phymateus leprosus</i>	bush locust
<b>Thysanoptera</b>	
<b>Thripidae</b>	
<i>Frankliniella tritici</i>	eastern flower thrips
<i>Taeniothrips meridionalis</i>	thrips
<i>Thrips angusticeps</i>	cabbage thrips
<i>Thrips flavus</i>	flower thrips
<b>Mite</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Acaridae</b>	
<i>Caloglyphus haripuriensis</i>	acarid mite
<b>Eriophyidae</b>	
<i>Acalitus phloeoptes</i>	plum bud gall mite
<i>Aceria chinensis</i>	-
<i>Aculus fockeui</i> [vector]	eriphyid mite
<i>Cenopalpus lanceolatisetae</i>	-
<i>Cenopalpus pulcher</i>	flat scarlet mite
<i>Epitrimerus pyri</i>	pear leaf blister mite
<i>Eriophyes armeniicus</i>	-

<i>Eriophyes catacardiae</i>	-
<i>Eriophyes emarginatae</i>	eriophyid mite
<i>Eriophyes inaequalis</i>	eriophyid mite
<i>Eriophyes padi</i>	eriophyid mite
<i>Eriophyes similis</i>	eriophyid mite
<i>Phytoptus insidiosus</i>	pineapple fruit mite
<b>Tarsonemidae</b>	
<i>Tarsonemus pruni</i>	tarsonemid mite
<i>Tarsonemus randsi</i>	-
<i>Tarsonemus smithi</i>	tarsonemid mite
<b>Tenuipalpidae</b>	
<i>Rhinotergum schestovici</i>	mite
<i>Tenuipalpus persicae</i>	false spider mite
<i>Tenuipalpus taonicus</i>	false spider mite
<b>Tetranychidae</b>	
<i>Aplonobia citri</i>	Japanese citrus rust mite
<i>Bryobia rubrioculus</i> f. sp. <i>prunicola</i>	brown mite
<i>Eotetranychus boreus</i>	apricot spider mite
<i>Eotetranychus carpini</i>	tetranychid mite
<i>Eotetranychus carpini borealis</i>	yellow spider mite
<i>Eotetranychus pruni</i>	hickory scorch mite
<i>Eotetranychus uncatus</i>	Lewis spider mite
<i>Eutetranychus africanus</i>	African red spider mite
<i>Eutetranychus enodes</i>	tetranychid mite
<i>Eutetranychus orientalis</i>	pear leaf blister mite
<i>Oligonychus gossypii</i>	tetranychid mite
<i>Oligonychus mangiferus</i>	mango spider mite
<i>Tetranychus canadensis</i>	fourspotted spider mite
<i>Tetranychus kanzawai</i>	kanzawa mite
<i>Tetranychus neocaledonicus</i>	Mexican spider mite
<i>Tetranychus pacificus</i>	Pacific spider mite
<i>Tetranychus viennensis</i>	twospotted mite
<b>Nematode</b>	
<b>Secernentea</b>	
<b>Tylenchida</b>	
<b>Pratylenchidae</b>	
<i>Pratylenchus brachyurus</i>	root lesion nematode
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Calosphaeriales</b>	
<b>Calosphaeriaceae</b>	
<i>Calosphaeria pulchella</i>	--
<b>Diaporthales</b>	
<b>Valsaceae</b>	
<i>Apiognomonium erythrostoma</i>	--
<i>Diaporthe decorticans</i>	-
<i>Diaporthe pennsylvanica</i>	-
<i>Diaporthe pruni</i>	-
<i>Leucostoma cincta</i> (anamorph <i>Cytospora cincta</i> )	canker
<b>Dothideales</b>	
<b>Botryosphaeriaceae</b>	
<i>Auerswaldiella puccinioides</i>	-
<b>Mycosphaerellaceae</b>	
<i>Mycosphaerella cerasella</i> (anamorph <i>Cercospora circumscissa</i> )	leaf spot
<i>Mycosphaerella nigerristigma</i>	-
<i>Mycosphaerella pruni-persicae</i> (anamorph <i>Miuraea persica</i> )	frosty mildew
<b>Schizothyriaceae</b>	
<i>Schizothyrium pomi</i> (anamorph <i>Zygophiala jamaicensis</i> )	fly speck
<b>Zopfiaceae</b>	

<i>Caryospora putaminum</i>	--
<b>unknown Dothideales</b>	
<i>Apiosporina morbosa</i>	black knot
<b>Erysiphales</b>	
<b>Erysiphaceae</b>	
<i>Sphaerotheca armeniaca</i>	--
<b>Leotiales</b>	
<b>Dermateaceae</b>	
<i>Blumeriella jaapii</i> (anamorph <i>Phloeosporella padi</i> )	shot-hole
<i>Dermea cerasi</i> (anamorph <i>Foveostroma drupacearum</i> )	--
<b>Sclerotiniaceae</b>	
<i>Grovesinia pyramidalis</i> (anamorph <i>Cristulariella moricola</i> )	target spot
<i>Lambertella jasmini</i>	rot
<i>Lambertella pruni</i>	fruit rot
<i>Monilinia fructigena</i> (anamorph <i>Monilia fructigena</i> )	European brown rot
<i>Monilinia kusanoi</i>	leaf blight
<i>Monilinia seaveri</i>	twig blight
<b>Phyllachorales</b>	
<b>Phyllachoraceae</b>	
<i>Polystigma rubrum</i>	--
<i>Polystigma ussuriensis</i>	--
<b>Taphrinales</b>	
<b>Taphrinaceae</b>	
<i>Taphrina armeniaca</i>	witches' broom
<i>Taphrina communis</i>	bladder fruit
<i>Taphrina confusa</i>	--
<i>Taphrina flectans</i>	-
<i>Taphrina pruni-subcordatae</i>	--
<b>Xylariales</b>	
<b>Xylariaceae</b>	
<i>Xylaria longiana</i>	--
<i>Xylaria mali</i>	black root rot
<b>unknown Ascomycota</b>	
<b>Hyponectriaceae</b>	
<i>Physalospora perseae</i>	peach blister canker
<b>Basidiomycota: Basidiomycetes</b>	
<b>Agaricales</b>	
<b>Strophariaceae</b>	
<i>Pholiota squarrosa</i>	wood decay
<b>Tricholomataceae</b>	
<i>Armillaria bulbosa</i>	armillaria root rot
<i>Armillaria heimii</i>	-
<i>Armillaria luteobubalina</i>	armillaria root rot
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	armillaria root rot
<i>Armillaria ostoyae</i>	armillaria root rot
<i>Armillaria tabescens</i>	armillaria root rot
<b>Ganodermatales</b>	
<b>Ganodermataceae</b>	
<i>Ganoderma brownii</i>	wood decay
<i>Ganoderma lobatum</i>	white soft decay
<i>Ganoderma lucidum</i> (anamorph <i>Polyporus lucidus</i> )	wood rot
<i>Ganoderma zonatum</i>	butt and stem rot
<b>Hericiales</b>	
<b>Gloeocystidiellaceae</b>	
<i>Gloeocystidiellum porosum</i>	--
<i>Laxitextum bicolor</i>	white rot
<b>Hymenochaetales</b>	
<b>Hymenochaetaceae</b>	
<i>Phellinus igniarius</i>	-
<i>Phellinus pomaceus</i>	white heart rot
<i>Phellinus prunicola</i>	-
<b>Poriales</b>	

<b>Coriolaceae</b>	
<i>Coriopsis gallica</i>	white rot
<i>Fomes fomentarius</i>	wood decay
<i>Fomitopsis cajanderi</i>	wood decay
<i>Fomitopsis meliae</i>	wood decay
<i>Fomitopsis pinicola</i>	brown cubical rot
<i>Fomitopsis rosea</i>	brown pocket rot
<i>Fomitopsis spraguei</i>	butt rot
<i>Gloeophyllum sepiarium</i>	brown rot
<i>Gloeophyllum trabeum</i>	brown rot
<i>Heterobasidion annosum</i> (anamorph <i>Spiniger meinekellum</i> )	wood rot
<i>Laetiporus sulphureus</i> (anamorph <i>Sporotrichum versisporum</i> )	brown cubical rot
<i>Oxyporus latemarginatus</i>	wood rot
<i>Trametes velutina</i>	dieback
<i>Trichaptum bifforme</i>	white rot
<i>Tyromyces chioneus</i>	white rot
<i>Tyromyces tephroleucus</i>	-
<b>Polyporaceae</b>	
<i>Polyporus squamosus</i>	wood rot
<b>Stereales</b>	
<b>Corticiaceae</b>	
<i>Phanerochaete arizonica</i>	white rot
<i>Phanerochaete crassa</i>	white rot
<b>Cyphellaceae</b>	
<i>Maireina marginata</i>	wood decay
<b>Hyphodermataceae</b>	
<i>Schizopora paradoxa</i>	wood rot
<b>Sistotremataceae</b>	
<i>Phymatotrichopsis omnivora</i>	Texas root rot
<b>Steccherinaceae</b>	
<i>Irpex lacteus</i>	wood rot
<b>Stereaceae</b>	
<i>Stereum strigoso-zonatum</i>	silver leaf
<b>Thelephorales</b>	
<b>Thelephoraceae</b>	
<i>Corticium koleroga</i>	web blight
<b>Basidiomycota: Teliomycetes</b>	
<b>Uredinales</b>	
<b>Uropyxidaceae</b>	
<i>Tranzschelia pruni-spinosae</i>	leaf rust
<b>unknown Uredinales</b>	
<i>Leucotelium pruni-persicae</i>	leucotelium white rust
<b>Oomycota</b>	
<b>Pythiaceae</b>	
<b>Pythaceae</b>	
<i>Phytophthora ramorum</i>	Sudden oak death disease
<b>Zygomycota: Zygomycetes</b>	
<b>Mucorales</b>	
<b>Gilbertellaceae</b>	
<i>Gilbertella persicaria</i>	fruit rot
<b>Mucoraceae</b>	
<i>Rhizopus circinans</i>	--
<b>mitosporic fungi</b>	
<b>unknown mitosporic fungi</b>	
<b>unknown mitosporic fungi</b>	
<i>Catenophora pruni</i>	--
<i>Fumago vagans</i>	--
<b>mitosporic fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Coniothyrium amygdali</i>	--
<i>Coniothyrium prunicolum</i>	coniothyrium disease

<i>Cytospora persicae</i>	--
<i>Diplodia pruni</i>	--
<i>Diplodia vulgaris</i>	--
<i>Diplodina persicae</i>	--
<i>Nattrassia mangiferae</i>	stem-end rot
<i>Phoma persicae</i>	leaf spot
<i>Phomopsis cinerascens</i>	fig canker
<i>Phomopsis perseae</i>	fruit rot
<i>Phyllosticta congesta</i>	phyllosticta rot
<i>Phyllosticta laurocerasi</i>	leaf spot
<i>Phyllosticta persicae</i>	target leaf spot
<i>Phyllosticta serotina</i>	-
<i>Phyllosticta virginiana</i>	--
<i>Septoria pruni</i>	--
<b>unknown Coelomycetes</b>	
<b>unknown Coelomycetes</b>	
<i>Asteromella mali</i>	--
<i>Cylindrosporium nuttallii</i>	-
<i>Gloeosporium laeticolor</i>	anthracnose
<i>Melanconium cerasinum</i>	-
<i>Pestalotia laurocerasi</i>	leaf spot
<i>Rhodosticta quercina</i>	peach canker
<b>mitosporic fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	
<b>Dematiaceae</b>	
<i>Alternaria mali</i>	alternaria blotch
<i>Cercospora effusa</i>	-
<i>Cercospora rubrotincta</i>	leaf spot
<i>Clasterosporium degenerans</i>	--
<i>Mycocentrospora cladosporioides</i>	fruit spot
<i>Phialophora parasitica</i>	stem dieback
<b>Moniliaceae</b>	
<i>Monilia angustior</i>	rot
<i>Monilia implicata</i>	rot
<b>unknown Hyphomycetes</b>	
<b>unknown Hyphomycetes</b>	
<i>Aureobasidium prunicola</i>	fruit rot
<i>Candida inconspicua</i>	sour pit
<b>unknown fungi</b>	
<b>unknown fungi</b>	
<b>unknown fungi</b>	
<i>Morrisographium persicae</i>	--
<b>Bacterium</b>	
<b>Bacillaceae</b>	
<i>Bacillus mesentericus vulgatus</i>	-
<b>Pseudomonadaceae</b>	
<i>Pseudomonas amygdali</i>	-
<i>Pseudomonas syringae</i> pv. <i>cerasicola</i>	bacterial gall
<b>Spiroplasmataceae</b>	
<i>Spiroplasma citri</i>	citrus stubborn
<b>Xanthomonadaceae</b>	
<i>Xylella fastidiosa</i>	Pierce's disease
<b>Virus</b>	
<i>American plum line pattern virus</i>	-
<i>Apple stem grooving virus</i> [Prunus-infecting strain]	-
<i>Apricot deformation mosaic virus</i>	-
<i>Apricot latent virus</i>	-
<i>Carnation Italian ringspot virus</i>	-
<i>Cherry Hungarian rasp leaf virus</i>	-
<i>Cherry leaf roll virus</i> [strains not in New Zealand]	-

<i>Cherry line pattern and leaf curl virus</i>	-
<i>Liittle cherry virus 1</i>	-
<i>Liittle cherry virus 2</i>	-
<i>Liittle cherry virus 3</i>	-
<i>Cherry mottle leaf virus</i>	-
<i>Cherry rasp leaf virus</i> [strains not in New Zealand]	-
<i>Cherry rosette disease associated virus</i>	-
<i>Cherry rough fruit virus</i>	-
<i>Cherry rusty mottle virus</i>	-
<i>Cherry twisted leaf virus</i>	-
<i>Cherry virus A</i>	-
<i>Epirus cherry virus</i>	-
<i>Myrobalan latent ringspot virus</i>	-
<i>Peach enation virus</i>	-
<i>Peach mosaic virus</i>	-
<i>Peach rosette mosaic virus</i>	-
<i>Peach violet mosaic virus</i>	-
<i>Peach yellow leaf virus</i>	-
<i>Petunia asteroid mosaic virus</i>	-
<i>Plum bark necrosis stem pitting-associated virus</i>	-
<i>Plum pox virus</i>	-
<i>Prunus virus S</i>	-
<i>Raspberry ringspot virus</i>	-
<i>Sowbane mosaic virus</i>	-
<i>Stocky prune virus</i>	-
<i>Tomato black ring virus</i>	-
<i>Tomato bushy stunt virus</i>	-
<i>Tomato ringspot virus</i> [strains not in New Zealand]	-

## Viroid

<i>Hop stunt viroid</i>	-
<i>Peach latent mosaic viroid</i>	-

## Phytoplasma

Apricot chlorotic leafroll phytoplasma	-
Apricot decline phytoplasma	-
Apricot witches broom phytoplasma	-
Cherry albino phytoplasma	-
Cherry blossom anomaly	-
Cherry lethal yellows	-
Cherry Moliere disease phytoplasma	-
Cherry western X anomaly	-
European stone fruit yellows phytoplasma	-
Peach decline phytoplasma	-
Peach red suture phytoplasma	-
Peach rosette phytoplasma	-
Peach vein clearing phytoplasma	-
Peach X-disease phytoplasma	-
Peach yellow leafroll phytoplasma	-
Peach yellows phytoplasma	-
Plum chlorotic leaf roll phytoplasma	-

## Disease of unknown aetiology

Amasya cherry disease agent	-
Apricot fruit blotch	-
Apricot necrotic leaf roll	-
Apricot pucker leaf agent	-
Apricot vein necrosis agent	-
Apricot yellow line pattern	-
Apricot yellow mosaic	-
Asteroid spot	-

Cherry (sweet) mora	-
Cherry Lambert mottle	-
Cherry black canker agent	-
Cherry chlorotic rusty spot agent	-
Cherry decline agent	-
Cherry freckle fruit agent	-
Cherry fruit necrosis	-
Cherry midleaf necrosis	-
Cherry mottling agent	-
Cherry necrotic crook agent	-
Cherry necrotic mottle leaf agent	-
Cherry pseudo leafroll	-
Cherry rough bark agent	-
Cherry short stem agent	-
Cherry sickle leaf	-
Cherry spur cherry agent	-
Cherry stem pitting agent	-
Cherry stunt	-
Cherry vein-clearing rosette	-
Cherry white spot	-
Cherry xylem aberration agent	-
Peach Mexican spot agent	-
Peach asteroid mosaic	-
Peach bark and wood grooving agent	-
Peach blotch agent	-
Peach chlorosis agent	-
Peach gummosis agent	-
Peach leaf necrosis agent	-
Peach leaf roll	-
Peach mottle agent	-
Peach oil blotch agent	-
Peach pseudo stunt agent	-
Peach purple mosaic agent	-
Peach red marbling agent	-
Peach seedling necrosis	-
Peach sooty ringspot agent	-
Peach star mosaic agent	-
Peach stubby twig agent	-
Peach wart agent	-
Peach weak peach	-
Peach willow leaf rosette	-
Peach yellow mosaic agent	-
Plum chlorosis and wilt	-
Plum diamond canker	-
Plum enation mottle	-
Plum leaf roll	-
Plum ochre mosaic agent	-
Plum ringspot and shot hole	-
Plum white spot	-
Prune diamond canker agent	-
Shirofugen stunt agent	-
Sour cherry (Montmorency) bark splitting agent	-
Sour cherry pink fruit agent	-
Sour cherry rusty splitting agent	-
Sour cherry vein yellow spot	-
Utah dixie rusty mottle	-

## Inspection, Testing and Treatment Requirements for *Prunus*

ORGANISM TYPES	MAF-ACCEPTED METHODS (See notes below)
<b>Insects</b>	Visual inspection AND <b>one</b> of the approved insecticide treatments (Refer to “Approved Treatments for <i>Prunus</i> ”)
<b>Mite</b>	Visual inspection AND <b>one</b> of the approved miticide treatments (Refer to “Approved Treatments for <i>Prunus</i> ”)
<b>Fungi</b>	Growing season inspection in PEQ for disease symptom expression AND plating on potato dextrose agar.
<b>Bacterium</b>	
<i>Bacillus mesentericus vulgatus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Pseudomonas amygdali</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Pseudomonas syringae</i> pv. <i>cerasicola</i>	Growing season inspection in PEQ for disease symptom expression AND plating on King’s B medium.
<i>Spiroplasma citri</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Xylella fastidiosa</i>	Growing season inspection in PEQ for disease symptom expression AND PCR (Minsavage <i>et al.</i> , 1994).
<b>Virus</b>	
<i>American plum line pattern virus</i>	ELISA or PCR AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana occidentalis</i> AND TEM.
<i>Apple stem grooving virus</i> [ <i>Prunus</i> -infecting strain]	ELISA or PCR AND herbaceous indicator <i>Chenopodium quinoa</i> AND TEM.
<i>Apricot deformation mosaic virus</i>	Woody indicators AND TEM.
<i>Apricot latent virus</i>	TEM.
<i>Carnation Italian ringspot virus</i>	TEM.
<i>Cherry Hungarian rasp leaf virus</i>	TEM.
<i>Cherry leaf roll virus</i> [strains not in New Zealand]	Woody indicators AND ELISA or PCR AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana benthamiana</i> AND TEM.
<i>Cherry line pattern and leaf curl virus</i>	Woody indicators AND TEM.
<i>Cherry mottle leaf virus</i>	Woody indicators AND ELISA or PCR AND herbaceous indicator <i>Chenopodium quinoa</i> AND TEM.
<i>Cherry rasp leaf virus</i> [strains not in New Zealand]	Woody indicators AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana benthamiana</i> AND TEM.
<i>Cherry rosette disease associated virus</i>	Woody indicators AND TEM.
<i>Cherry rough fruit virus</i>	TEM.
<i>Cherry rusty mottle virus</i>	Woody indicators AND TEM.
<i>Cherry twisted leaf virus</i>	Woody indicators AND herbaceous indicator <i>Nicotiana occidentalis</i> AND TEM.
<i>Cherry virus A</i>	TEM.
<i>Epirus cherry virus</i>	Woody indicators AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana benthamiana</i> AND TEM.
<i>Little cherry virus 1</i>	Woody indicators AND TEM.
<i>Little cherry virus 2</i>	Woody indicators AND TEM.
<i>Little cherry virus 3</i>	Woody indicators AND TEM.
<i>Myrobalan latent ringspot virus</i>	Woody indicators AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana benthamiana</i> AND TEM.
<i>Peach enation virus</i>	Woody indicators AND herbaceous indicator <i>Chenopodium quinoa</i> AND TEM.
<i>Peach mosaic virus</i>	Woody indicators AND herbaceous indicator <i>Chenopodium quinoa</i> AND TEM.
<i>Peach rosette mosaic virus</i>	Woody indicators AND ELISA or PCR AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana benthamiana</i> AND TEM.
<i>Peach violet mosaic virus</i>	TEM.

<i>Peach yellow leaf virus</i>	TEM.
<i>Petunia asteroid mosaic virus</i>	Woody indicators AND TEM.
<i>Plum bark necrosis stem pitting-associated virus</i>	Woody indicators AND TEM.
<i>Plum pox virus</i>	Woody indicators AND ELISA or PCR (two sets) AND herbaceous indicator <i>Nicotiana benthamiana</i> AND TEM.
<i>Prunus virus S</i>	TEM.
<i>Raspberry ringspot virus</i>	Woody indicators AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana benthamiana</i> AND TEM.
<i>Sowbane mosaic virus</i>	Herbaceous indicator <i>Chenopodium quinoa</i> AND TEM.
<i>Stocky prune virus</i>	TEM.
<i>Tomato black ring virus</i>	ELISA or PCR AND herbaceous indicators <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> AND TEM.
<i>Tomato bushy stunt virus</i>	ELISA or PCR AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana benthamiana</i> AND TEM.
<i>Tomato ringspot virus</i> [strains not in New Zealand]	Woody indicators AND ELISA or PCR AND herbaceous indicators <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana benthamiana</i> AND TEM.
<b>Viroid</b>	
<i>Hop stunt viroid</i>	Hybridization or PAGE or PCR.
<i>Peach latent mosaic viroid</i>	Woody indicators AND Hybridization or PAGE or PCR.
<b>Phytoplasmas</b>	Nested PCR using the universal phytoplasma fU5/rU3 (Lorenz <i>et al.</i> 1995) and R16F2n/R16R2 primers (Gundersen <i>et al.</i> 1996).
<b>Diseases of unknown aetiology</b>	Woody indicators AND growing season inspection in PEQ for disease symptom expression.

#### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. Transmission electron microscopy (TEM); in the spring, leaves from grafted cuttings must be observed under the electron microscope for virus particles.
3. Herbaceous indexing: At least two plants of each herbaceous indicator species must be used in each test. Tests are to be carried out using the new season's growth from grafted cuttings in the spring. Plants shall be sampled from at least two positions on every plant including a young, fully expanded leaf at the top of each plant and an older leaf from a midway position. Herbaceous indicator plants must be grown under appropriate temperatures and must be shaded for 24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
4. Woody indexing:

Woody indicator	<i>Prunus armeniaca</i>	<i>Prunus avium</i> & <i>Prunus cerasus</i>	<i>Prunus domestica</i> & <i>Prunus salicina</i>	<i>Prunus dulcis</i>	All other <i>Prunus</i> spp.
<i>Prunus armeniaca</i> cv. Tilton	x3				x3
<i>Prunus avium</i> cv. Bing		x3			
<i>Prunus avium</i> cv. Sam		x3			x3
<i>Prunus domestica</i> cv. Shiroplum		x3	x3		x3

<i>Prunus persica</i> cv. Elberta or GF305	x4	x4	x4	x4	x4
<b>Total indicators</b>	<b>10</b>	<b>13</b>	<b>7</b>	<b>4</b>	<b>13</b>

At least three plants (four plants for *Prunus persica* cv. Elberta or GF305) of each woody indicator must be used in each test. All woody indicators are to be inoculated by double budding. Inoculations are to be carried out using the dormant, imported cuttings during winter. The inoculated woody indicator plants must be inspected for symptoms of pathogen infection for at least 9 months.

5. Molecular tests for viroids. Tests are to be carried out on dormant, grafted cuttings during the winter after importation.
6. Polymerase chain reaction (PCR) tests for phytoplasmas. Tests are to be carried out on two occasions, firstly using the imported dormant cuttings during winter and secondly using the new season's growth from grafted cuttings during the following summer.
7. Enzyme linked immunosorbent assay (ELISA) and PCR tests for viruses. Tests are to be carried out using the new season's growth from grafted cuttings in the spring. Plants shall be sampled from at least two positions on every plant including a young, fully expanded leaflet at the top of each stem and an older leaflet from a midway position.
8. All PCR, ELISA and hybridization tests must be validated using positive controls prior to use in quarantine testing. Positive and negative controls (including a blank water control for PCR) must be used in all tests. Ideally positive internal controls and a negative plant control should also be used in PCR tests.
9. Inspect *Prunus* plants for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.
10. With prior notification, MAF will accept other internationally recognised testing methods.

### References

- Gundersen, D.E., Lee, I.M. 1996. Ultrasensitive detection of phytoplasmas by nested-PCR assays using two universal primer pairs. *Phytopathologia Mediterranea* 35: 144-151.
- Lorenz, K.H., Scheider, B., Ahrens, U., Seemuller, E. 1995. Detection of the Apple proliferation and Pear decline phytoplasmas by PCR Amplification of ribosomal and nonribosomal DNA. *Phytopathology* 85: 771-776.
- Minsavage G.V., Thompson C.M., Hopkins D.L., Leite R.M.V.B.C., Stall R.E., 1994. Development of a PCR protocol for detection of *Xylella fastidiosa* in plant tissue. *Phytopathology* 84: 456-461.

## *Pseudotsuga*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Pseudotsuga*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Bursaphelenchus* spp.; *Lophodermium* spp.; Uredinales; *Xylella fastidiosa*; *Phytophthora ramorum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 6 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

*Pyrus*

**Scientific name**

**Commodity Sub-class**

**Date Issued**

*Pyrus communis*

Cuttings (dormant)

12 June 1998

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Quercus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

**Quarantine Pests:** *Ceratocystis fagacearum*; *Cryphonectria parasitica*; *Cronatium quercuum*; *Phytophthora ramorum*; *Xylella fastidiosa*

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Ranunculus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard. These conditions do not apply to *Ranunculus arvensis*, *Ranunculus repens* and *Ranunculus sardous*, for which there is currently no import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Phymatotrichopsis omnivora*; Virus diseases

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom:**

**OPTION 1:**

**No import permit is required.**

**PEQ:** None

**Additional Declaration(s):**

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

**OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from the USA:**

**No import permit is required unless the bulbs require post-entry quarantine.**

**PEQ:** None or Level 2 (see below)

**Additional Declaration(s):**

1. "In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests".

2. "The dormant tubers have been sourced from a “Pest free area”, free from *Phymatotrichopsis omnivora*".

**OR**

(i) "The dormant bulbs have been sourced from a “Pest free place of production”, free from *Phymatotrichopsis omnivora*".

**AND**

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 “Pesticide treatments for dormant bulbs”. If satisfied that the pre-shipment activities have been

undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate.

AND

(iii) Post-entry quarantine: Upon arrival in New Zealand the dormant bulbs will require a period of at least 3 months in Level 2 post-entry quarantine.

**D. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**PEQ:** Level 1 or Level 2 (see below)

**Minimum Period:** 3 months

**Additional Declaration(s):**

1. "The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

2. "The dormant tubers have been sourced from a “Pest free area”, free from *Phymatotrichopsis omnivora*".

**OR**

(i) "The dormant bulbs have been sourced from a “Pest free place of production”, free from *Phymatotrichopsis omnivora*".

AND

(ii) the consignment must be treated for fungi as described in Section 2.2.1.7 “Pesticide treatments for dormant bulbs”. If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section of the phytosanitary certificate.

AND

(iii) Post-entry quarantine: Upon arrival in New Zealand the dormant bulbs will require a period of at least 3 months in Level 2 post-entry quarantine.

**E. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."

## *Rhododendron*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Rhododendron*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Microsphaera* spp.; *Ovulinia azaleae*; *Phytophthora ramorum*; Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **Additional Declaration:**

1. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

2. "*Microsphaera* spp., and the following rust diseases are not known to occur on *Rhododendron* spp. in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

*Aecidium rhododendri*; *Aecidium sinorhododendri*; *Chrysomyxa ledi*; *Chrysomyxa ledicola*; *Chrysomyxa dieteli*; *Chrysomyxa expansa*; *Chrysomyxa himalensis*; *Chrysomyxa komarovii*; *Chrysomyxa piperiana*; *Chrysomyxa roanensis*; *Chrysomyxa succinea*; *Chrysomyxa taghishae*

*Puccinia rhododendri*; *Pucciniastrum vaccinii*

#### **OR**

a) All visible flower buds are to be removed prior to export; and

b) On arrival in New Zealand the plant material is to be treated, under the supervision of an Inspector, at a MAF-registered transitional facility by dipping in Benomyl, Carbendazim or Thiophanate methyl [choose one] at a rate of 250mg a.i. per litre.

#### **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

## *Ribes*

<b>Scientific name</b>	<b>Commodity Sub-class</b>	<b>Date Issued</b>
<i>Ribes nigrum</i>	Whole Plants	19 June 1998
<i>Ribes uva-crispa</i>	Whole Plants	19 June 1998

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Rosa*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard. These conditions do not apply to *Rosa gymnocarpa*, for which there is currently no import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

**Quarantine Pests:** Uredinales; *Xylella fastidiosa*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

1. Additional declaration: "The plants have been dipped in propiconazole at the rate of 5g a.i. per 10 litres of water".
2. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

**B. For Cuttings (dormant):**

**PEQ:** Level 1

**Minimum Period:** 6 months

**Additional Declaration(s):**

"The plants have been sourced from a “Pest free area”, free from *Xylella fastidiosa*".

**C. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Rubus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Rubus* nursery stock approved for entry into New Zealand**

Cuttings (runner tips and stem cuttings only); Plants in tissue culture

*Rubus* can be imported into Level 2 post entry quarantine from MAF-accredited facilities, or into Level 3 post entry quarantine from non-accredited facilities.

**2. Pests of *Rubus***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Rubus* cuttings and tissue culture from offshore MAF-accredited facilities in any country**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Rubus*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Rubus*.

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Rubus* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Rubus* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section [cuttings only] and by providing the following additional declarations to the phytosanitary certificate:

"The *Rubus* cuttings / plants in tissue culture [choose ONE option] have been:

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification."

(v) Post-entry quarantine

**PEQ:** All *Rubus* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** Upon arrival in the post entry quarantine facility, all cuttings must be dipped in 1% sodium hypochlorite for 2 minutes. The nursery stock will be grown for a minimum period of 6 months (active continuous growth) in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. Six months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.2 *Rubus* cuttings and tissue culture from non-accredited facilities in any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Rubus* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Rubus* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section [cuttings only]. No additional declarations are required.

(iv) Post-entry quarantine

**PEQ:** All *Rubus* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator*.

**Quarantine Period and Inspection, Testing and Treatment Requirements:** Upon arrival in the post entry quarantine facility, all cuttings must be dipped in 1% sodium hypochlorite for 2 minutes. The nursery stock will be grown for a minimum period of 16 months (cuttings) in post-entry quarantine. Tissue cultures must be exflasked, and the exflasked plant material grown in a PEQ greenhouse during the quarantine period. During this time, imported material will be inspected, treated and/or tested for regulated pests as specified in the “Inspection, Testing and Treatment Requirements for *Rubus*”, at the expense of the importer. These times are indicative minimum quarantine periods and may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Rubus*

## REGULATED PESTS (actionable)

### Insects

#### Insecta

#### Coleoptera

##### Attelabidae

*Rhynchites germanicus* strawberry rhynchites

##### Buprestidae

*Agrilus aurichalceus* raspberry buprestid

*Agrilus rubicola* raspberry buprestid

*Agrilus ruficollis* red-necked cane borer

##### Byturidae

*Byturus ochraceus* raspberry beetle

*Byturus rubi* eastern raspberry fruitworm

*Byturus tomentosus* raspberry beetle

*Byturus unicolor* raspberry fruitworm

*Byturus urbanus* raspberry beetle

##### Cerambycidae

*Coreus marginatus* longhorn beetle

*Oberea bimaculata* raspberry caneborer

##### Chrysomelidae

*Batophila aerata* raspberry flea beetle

*Batophila rubi* raspberry flea beetle

*Brachypnoea exilis grita* flea beetle

*Nodonota margaretae* leaf beetle

##### Curculionidae

*Anthonomus rubi* apple blossom weevil

*Anthonomus signatus* blossom weevil

*Merhynchites bicolor* rose curculio

*Merhynchites wickhami* curculio

*Nemocestes incomptus* strawberry root weevil

*Otiorhynchus clavipes* red-legged weevil

*Otiorhynchus singularis* clay covered weevil

*Rhynchaenus fagi* strawberry weevil

*Scleropterus verecundus* weevil

##### Nitidulidae

*Meligethes hebes* sap beetle

##### Scarabaeidae

*Cetonia aurata pisana* scarabaeid beetle

*Cotinis nitida* green June beetle

*Macrodactylus subspinosus* rose chafer

*Phyllopertha horticola* garden chafer

*Popillia japonica* Japanese beetle

#### Diptera

##### Agromyzidae

*Agromyza spiraeae* rose leafminer

##### Anthomyiidae

*Pegomya rubivora* raspberry cane maggot

##### Cecidomyiidae

*Contarinia agrimoniae* midge

*Contarinia rubicola* blackberry flower midge

*Dasineura plicatrix* blackberry leaf midge

*Lasioptera rubi* raspberry gall midge

*Resseliella theobaldi* raspberry midge

#### Hemiptera

##### Anthocoridae

*Orius vicinus* raspberry bug

##### Miridae

<i>Lygocoris pabulinus</i>	common green caspid
<i>Lygus lineolaris</i>	tarnished plant bug
<i>Macrolophus rubi</i>	mirid
<i>Psallus variabilis</i>	mirid
<b>Pentatomidae</b>	
<i>Dolycoris baccarum</i>	stink bug
<i>Pentatoma rufipes</i>	forest bug
<b>Homoptera</b>	
<b>Aetalionidae</b>	
<i>Aetalion reticulatum</i>	-
<b>Aphididae</b>	
<i>Amphorophora agathonica</i>	strawberry aphid
<i>Amphorophora idaei</i>	large raspberry aphid
<i>Amphorophora rubitoxica</i>	aphid
<i>Aphis rubicola</i> [vect.]	raspberry aphid
<i>Aphis ruborum</i>	permanent blackberry aphid
<i>Macrosiphum funestum</i>	rose aphid
<i>Matsumuraja hirakurensis</i>	raspberry aphid
<b>Cicadellidae</b>	
<i>Dikrella californica</i>	blueberry leafhopper
<i>Dikrella cruentata</i>	leafhopper
<i>Edwardsiana rosae</i>	rose leafhopper
<i>Erythroneura rubiphylla</i>	leafhopper
<i>Macropsis fulcatus</i>	leafhopper
<i>Macropsis fuscata</i>	boysenberry leafhopper
<i>Metascarta impressifrons</i>	leafhopper
<i>Typhlocyba</i> spp.	rubus leafhoppers
<b>Issidae</b>	
<i>Mycterodus serbicus</i>	plant bug
<b>Psyllidae</b>	
<i>Trioza tripunctata</i>	blackberry psyllid
<i>Trioza trisignata</i>	psyllid
<b>Hymenoptera</b>	
<b>Cephalidae</b>	
<i>Hartigia albomaculata</i>	sawfly borer
<b>Cynipidae</b>	
<i>Diastrophus</i> spp.	stem gall cynipids
<b>Pamphilidae</b>	
<i>Pamphilus sitkensis</i>	sawfly
<b>Pergidae</b>	
<i>Philomastix macleaii</i>	bramble sawfly
<b>Tenthredinidae</b>	
<i>Allantus cinctus</i>	banded rose sawfly
<i>Emphytus calceatus</i>	sawfly
<i>Empria tridens</i>	raspberry sawfly
<i>Metallus pumilus</i>	raspberry leaf-mining sawfly
<i>Metallus rohweri</i>	raspberry leafmining sawflies
<i>Metallus rubi</i>	blackberry leafminer
<i>Monophadnoides geniculatus</i>	raspberry sawfly
<i>Perineura rubi</i>	sawfly
<i>Sterictiphora furcata</i>	sawfly
<b>Lepidoptera</b>	
<b>Geometridae</b>	
<i>Itame wauaria</i>	v-moth
<i>Operophtera bruceata</i>	Bruce spanworm
<i>Operophtera brumata</i>	European winter moth
<b>Hepialidae</b>	
<i>Hepialus humuli</i>	ghost swift moth
<b>Incurvariidae</b>	
<i>Lampronia rubiella</i>	raspberry bud moth
<b>Lymantriidae</b>	

<i>Euproctis chrysorrhoea</i>	brown-tail moth
<i>Lymantria dispar</i>	Asian gypsy moth
<i>Orgyia antiqua</i>	rusty tussock moth
<b>Megalopygidae</b>	
<i>Megalopyge lanata</i>	-
<b>Nepticulidae</b>	
<i>Stigmella aurella</i>	-
<i>Stigmella splendidissima</i>	-
<b>Noctuidae</b>	
<i>Acronicta psi</i>	grey dagger moth
<i>Agrotis segetum</i>	turnip moth
<i>Cosmia trapezina</i>	dun-bar moth
<i>Eudocima tyrannus</i>	Akebia leaf-like moth
<i>Graphiphora augur</i>	double dart moth
<i>Melanchra persicariae</i>	dot moth
<i>Oraesia emarginata</i>	fruit-piercing moth
<i>Papaipema nebris</i>	stalk borer
<i>Peridroma saucia</i>	variegated cutworm
<i>Spirama retorta</i>	fruit sucking moth
<i>Xestia c-nigrum</i>	spotted cutworm
<b>Notodontidae</b>	
<i>Phalera bucephala</i>	buff-tip moth
<b>Saturniidae</b>	
<i>Saturnia pavonia</i>	silk moth
<b>Sesiidae</b>	
<i>Pennisetia hylaeiformis</i>	raspberry crownborer
<i>Pennisetia marginata</i>	raspberry crownborer
<i>Synanthedon bibionipennis</i>	strawberry crown moth
<b>Tortricidae</b>	
<i>Acleris comariana</i>	leafroller
<i>Acleris laterana</i>	broad barred button moth
<i>Archips oporanus</i>	fruit tree tortix
<i>Argyrotaenia citrana</i>	orange tortix
<i>Choristoneura rosaceana</i>	obliquebanded leafroller
<i>Cnephasia longana</i>	omnivorous leaf-tier
<i>Epiblema uddmanniana</i>	bramble shoot borer
<i>Olethreutes concinnana</i>	leafroller
<i>Olethreutes furfuranum</i>	leafroller
<i>Pandemis cerasana</i>	leafroller
<i>Spilonota ocellana</i>	eye-spotted bud moth
<b>Orthoptera</b>	
<b>Gryllidae</b>	
<i>Oecanthus nigricornis</i>	blackhorned tree cricket
<i>Oecanthus pellucens</i>	blackhorned tree cricket
<b>Phasmida</b>	
<b>Phasmatidae</b>	
<i>Carausius morosus</i>	wingless stick insect
<b>Thysanoptera</b>	
<b>Thripidae</b>	
<i>Thrips flavus</i>	flower thrips
<b>Mites</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Eriophyidae</b>	
<i>Cenopalpus pseudospinosus</i>	rust mite
<i>Epitrimerus gibbosus</i>	eriophyid mite
<i>Eriophyes rubi</i>	eriophyid mite
<i>Phyllocoptes gibbosus</i>	eriophyid mite
<i>Phyllocoptes gracilis</i>	raspberry mite
<i>Phyllocoptes rubi</i>	eriophyid mite

<b>Eupodidae</b>	
<i>Neotetranychus rubi</i>	raspberry mite
<b>Tetranychidae</b>	
<i>Amphitetranychus viennensis</i>	hawthorn spider mite
<b>Nematodes</b>	
<b>Adenophorea</b>	
<b>Dorylaimida</b>	
<b>Longidoridae</b>	
<i>Xiphinema bakeri</i>	dagger nematode
<i>Xiphinema bareense</i>	dagger nematode
<b>Secernentea</b>	
<b>Tylenchida</b>	
<b>Criconematidae</b>	
<i>Criconemella axestis</i>	-
<i>Criconemella curvata</i>	ring nematode
<i>Criconemella denoudenii</i>	-
<i>Criconemella ornata</i>	ring nematode
<i>Criconemella sphaerocephala</i>	ring nematode
<i>Criconemella xenoplax</i>	ring nematode
<b>Dolichodoridae</b>	
<i>Tylenchorhynchus claytoni</i>	tobacco stunt nematode
<b>Hoplolaimidae</b>	
<i>Helicotylenchus platyurus</i>	-
<i>Hoplolaimus magnistylus</i>	-
<i>Scutellonema bradys</i>	yam nematode
<b>Pratylenchidae</b>	
<i>Hirschmanniella oryzae</i>	rice root nematode
<b>Fungi</b>	
<b>Ascomycota: Ascomycetes</b>	
<b>Diaporthales</b>	
<b>Valsaceae</b>	
<i>Gnomonia rostellata</i>	-
<i>Gnomonia rubi</i> (anamorph <i>Gloeosporium</i> sp.)	cane canker, dieback
<i>Gnomonia setacea</i>	cane canker, dieback
<b>Dothideales</b>	
<b>Leptosphaeriaceae</b>	
<i>Leptosphaeria thomasi</i>	cane blight
<b>Melanconidaceae</b>	
<i>Sydowiella depressula</i>	-
<b>Mycosphaerellaceae</b>	
<i>Mycosphaerella confusa</i> (anamorph <i>Pseudocercospora rubi</i> )	cercospora leaf spot
<i>Mycosphaerella ligea</i>	cane & leaf spot
<i>Mycosphaerella rubi</i> (anamorph <i>Septoria rubi</i> )	cane & leaf spot
<i>Sphaerulina rubi</i> (anamorph <i>Cylindrosporium rubi</i> )	-
<b>Helotiales</b>	
<b>Dermateaceae</b>	
<i>Pyrenopeziza rubi</i>	cane spot
<b>Sclerotiniaceae</b>	
<i>Monilinia fructigena</i> (anamorph <i>Monilia fructigena</i> )	brown rot
<b>Meliolales</b>	
<b>Meliolaceae</b>	
<i>Appendiculella calstroma</i>	black mildew
<b>Unknown Ascomycetes</b>	
-	
<i>Hormotheca rubicola</i>	-
<b>Basidiomycota: Basidiomycetes</b>	
<b>Agaricales</b>	
<b>Tricholomataceae</b>	

<i>Armillaria gallica</i>	armillaria root rot
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	shoestring root rot
<i>Armillaria ostoyae</i>	armillaria root rot
<b>Russulales</b>	
<b>Lachnocladiaceae</b>	
<i>Scytinostroma galactinum</i>	Scytinostroma galactinum
<b>Unknown Basidiomycetes</b>	
<i>Gerwasia epiphylla</i>	-
<b>Basidiomycota: Urediniomycetes</b>	
<b>Stereales</b>	
<b>Sistotremataceae</b>	
<i>Phymatotrichopsis omnivora</i>	Texas root rot
<b>Uredinales</b>	
<b>Phragmidiaceae</b>	
<i>Arthuriomyces peckianus</i>	orange rust
<i>Gymnoconia nitens</i>	rust
<i>Hamaspora longissima</i>	sub-tropical rust
<i>Phragmidium alaskanum</i>	-
<i>Phragmidium bulbosum</i>	rust
<i>Phragmidium occidentale</i>	-
<b>Pucciniastraceae</b>	
<i>Pucciniastrum americanum</i>	late leaf rust
<i>Pucciniastrum arcticum</i>	-
<b>Mitosporic Fungi (Coelomycetes)</b>	
<i>Hapalosphaeria deformans</i>	anther blight
<i>Macrophoma rubi</i>	-
<i>Marssonina potentillae</i>	leaf scorch
<i>Phyllosticta carpogena</i>	-
<b>Mitosporic Fungi (Hyphomycetes)</b>	
<i>Fusicladium grayianum</i>	-
<i>Passalora monrosii</i>	-
<i>Pseudocercospora heteromalla</i>	-
<i>Pseudocercospora rubicola</i>	-
<i>Verticillium albo-atrum</i> [severe strain]	verticillium wilt
<b>Zygomycota: Zygomycetes</b>	
<b>Mucorales</b>	
<b>Mucoraceae</b>	
<i>Rhizopus sexualis</i>	soft rot
<b>Chromista</b>	
<b>Oomycota</b>	
<b>Pythiaceae</b>	
<i>Phytophthora idaei</i>	-
<i>Phytophthora ramorum</i>	sudden oak death
<i>Phytophthora rubi</i>	root rot
<b>Bacteria</b>	
-	
-	
<b>Rhizobiaceae</b>	
<i>Agrobacterium rubi</i>	cane gall
<b>Xanthomonadaceae</b>	
<i>Xylella fastidiosa</i>	Pierce's disease
<b>Viruses</b>	
-	
-	
-	
<i>Black raspberry necrosis virus</i> [strains not in New Zealand]	-
<i>Blackberry calico virus</i>	-

<i>Blackberry chlorotic ringspot virus</i>	-
<i>Blackberry virus Y</i>	-
<i>Blackberry yellow vein associated virus</i>	-
<i>Bramble yellow mosaic virus</i>	-
<i>Cherry rasp leaf virus</i>	-
<i>Hawaiian rubus leaf curl virus</i>	-
<i>Raspberry leaf curl virus</i>	-
<i>Raspberry ringspot virus</i>	-
<i>Rubus Chinese seedborne virus</i>	-
<i>Rubus chlorotic mottle virus</i>	-
<i>Rubus yellow net virus</i>	-
<i>Thimbleberry ringspot virus</i>	-
<i>Tobacco necrosis virus</i> [strains not in New Zealand]	-
<i>Tomato black ring virus</i>	-
<i>Tomato ringspot virus</i> [strains not in New Zealand]	-
<i>Wineberry latent virus</i>	-

#### **Phytoplasmas**

-		
-		
-		
	Black raspberry witches'-broom phytoplasma	-
	Rubus stunt phytoplasma	-

#### **Disease of unknown etiology**

-		
-		
-		
	Alpine mosaic agent	-
	Black raspberry streak disease	-
	Raspberry chlorotic net disease	-
	Raspberry yellow spot disease	-

\*For organisms intercepted that are not listed within this pest list refer to the [Biosecurity Organisms Register for Imported Commodities](#) to determine the regulatory status.

## Inspection, Testing and Treatment Requirements for *Rubus*

ORGANISM TYPES	MAF-ACCEPTABLE METHODS
<b>Insects</b>	Visual inspection <b>AND</b> approved insecticide treatments as described in section 2.2.1.6 of the Basic conditions [cuttings only]
<b>Mites</b>	Visual inspection <b>AND</b> approved miticide treatments as described in the <a href="#">section</a> 2.2.1.6 of the Basic conditions [cuttings only] <b>or</b> binocular microscope inspection in PEQ [plants in tissue culture only]
<b>Fungi</b>	Growing season inspection in PEQ for symptom expression
<b>Chromista</b>	Growing season inspection in PEQ for symptom expression
<b>Bacteria</b>	
<i>Agrobacterium rubi</i>	Growing season inspection for symptom expression
<i>Xylella fastidiosa</i>	Growing season inspection for symptom expression <b>AND</b> PCR
<b>Viruses</b>	
<i>Black raspberry necrosis virus</i> [strains not in New Zealand]	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i> <b>AND</b> PCR
<i>Blackberry calico virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> )
<i>Blackberry chlorotic ringspot virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> ) <b>AND</b> PCR
<i>Blackberry virus Y</i>	Country freedom <b>OR</b> RT-PCR using BVY-specific primers
<i>Blackberry yellow vein associated virus</i>	Country freedom <b>OR</b> PCR
<i>Bramble yellow mosaic virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> )
<i>Cherry rasp leaf virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> , and <i>Nicotiana clevelandii</i> ) <b>AND</b> ELISA or PCR
<i>Hawaiian rubus leaf curl virus</i>	Country freedom <b>OR</b> Growing season inspection for symptom expression
<i>Raspberry leaf curl virus</i>	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i>
<i>Raspberry ringspot virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> , and <i>Nicotiana clevelandii</i> ) <b>AND</b> ELISA or PCR
<i>Rubus Chinese seedborne virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> , and <i>Nicotiana clevelandii</i> )
<i>Rubus chlorotic mottle virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> )
<i>Rubus yellow net virus</i>	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i> <b>AND</b> PCR
<i>Thimbleberry ringspot virus</i>	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i>
<i>Tobacco necrosis virus</i> [strains not in New Zealand]	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana clevelandii</i> )
<i>Tomato black ring virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> , and <i>Nicotiana clevelandii</i> ) <b>AND</b> ELISA or PCR
<i>Tomato ringspot virus</i> [strains not in New Zealand]	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> , and

	<i>Nicotiana clevelandii</i> ) AND ELISA or PCR
<i>Wineberry latent virus</i>	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> )
<b>Phytoplasmas</b>	
Black raspberry witches'-broom phytoplasma	Country freedom <b>OR</b> Nested PCR using the universal phytoplasma primers P1/P7 (Deng & Hiruki, 1991; Schneider <i>et al.</i> , 1995) followed by R16F2/R16R2 (Lee <i>et al.</i> , 1995)
Rubus stunt phytoplasma	Country freedom <b>OR</b> Nested PCR using the universal phytoplasma primers P1/P7 (Deng & Hiruki, 1991; Schneider <i>et al.</i> , 1995) followed by R16F2/R16R2 (Lee <i>et al.</i> , 1995)
<b>Diseases of unknown etiology</b>	
Alpine mosaic agent	Country freedom <b>OR</b> Growing season inspection for symptom expression
Black raspberry streak disease	Country freedom <b>OR</b> Growing season inspection for symptom expression
Raspberry chlorotic net disease	Country freedom <b>OR</b> Growing season inspection for symptom expression
Raspberry yellow spot disease	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i>

#### Notes:

1. **Country freedom** for regulated viruses, diseases of unknown etiology, and phytoplasmas will only be accepted when material is sourced from a MAF-accredited offshore facility. Country freedom must be endorsed by the exporting NPPO, and must be included in the agreement between MAF and the accredited offshore facility.
2. **Unit for testing** is an individual tissue culture plantlet or cutting. Each single plantlet or cutting must be labeled individually and tested separately.  
Samples from up to five plants may be bulked for testing provided that either:
  - a) the plants were derived from a single imported cutting which was split into separate cuttings upon arrival in New Zealand, in the presence of a MAF Biosecurity New Zealand Inspector; or
  - b) in the case of tissue culture where plants are clonal, and this is confirmed by evidence from the National Plant Protection Organisation in the exporting country.
3. **Tissue culture plantlets** must be potted up and grown in a MAFBNZ approved greenhouse, only material from the greenhouse is to be selected for testing.
4. **Growing season** is defined as an extended period of plant growth that includes environmental conditions equivalent to spring (longer wetter days and colder temperatures), summer (longer dryer days and warm temperatures), and autumn (shorter wetter days and warm but cooling temperatures).
5. **Virus testing** is to be conducted on new spring growth.
6. **Phytoplasma and bacteria testing** is to be conducted at the end of the summer growth period.
7. **Graft indexing:** Each *Rubus* plant must be tested by leaf-grafting or bottle-grafting onto two replicate indicator plants. The indicator plants must be maintained in a vigorous state of growth before and after grafting. Grafted plants are to be inspected regularly for symptoms of disease for at least 3 months.  
A single indicator plant must be left ungrafted as a negative control. It is recommended that a single indicator plant is budded with a positive control; the positive control is to be a non-regulated virus of *Rubus*.

- 8. Herbaceous indicator plants:** *Chenopodium quinoa*, *Cucumis sativus*, and *Nicotiana clevelandii*. Two plants of each herbaceous indicator species must be used in each test. Herbaceous indicator plants must be grown at 18-25°C before and after inoculation and must be shaded for 24 hrs prior to inoculation. Post-inoculated indicator species must be held under appropriate glasshouse conditions for at least 4 weeks. Inoculated indicator plants must be inspected at least twice per week for symptoms of virus infection.

A single plant of each indicator species must be inoculated with buffer solution as a negative control. It is recommended that a single plant of each indicator species is inoculated with a positive control; the positive control is to be a non-regulated virus of *Rubus*.
- 9. Enzyme linked immunosorbent assay (ELISA) tests.** All ELISA tests must be validated using positive and negative controls prior to use in quarantine testing. Positive and negative controls must be used in all tests.
- 10. Polymerase chain reaction (PCR) tests.** All PCR tests must be validated using positive and negative controls prior to use in quarantine testing. Positive and no template controls must be used in all tests. Ideally positive internal control primers and a negative plant control should also be used in PCR tests.
- 11. Inspection** of the *Rubus* plants by the Operator of the PEQ facility for signs of pest and disease must be at least twice per week during periods of active growth. A record of inspections carried out by the Operator is to be kept and made available to the MAF Biosecurity New Zealand Inspector on request.
- 12. Other internationally recognised testing methods** may be accepted by MAF with prior notification.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Salix*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Erwinia salicis*, *Melampsora* spp., *Phytophthora ramorum*; *Xylella fastidiosa*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MAF-registered laboratory at the importers expense, prior to release to the importer.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Sandersonia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **1. Type of *Sandersonia* nursery stock approved for entry into New Zealand**

Dormant bulbs

Plants in tissue culture

### **2. Pests of *Sandersonia***

Refer to the pest list.

### **3. Entry conditions for:**

#### **3.1 *Sandersonia* dormant bulbs from any country**

##### (i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

##### (ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Sandersonia* dormant bulbs have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- held in a manner to ensure that infestation/reinfestation does not occur, following certification.

##### (iii) Additional declarations to the phytosanitary certificate

No additional declarations are required.

#### **3.2 *Sandersonia* plants in tissue culture from any country**

##### (i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

##### (ii) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

##### (iii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Sandersonia* plants in tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

(iv) *Additional declarations to the phytosanitary certificate*  
No additional declarations are required.

## *Solanum tuberosum*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Solanum tuberosum*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **1. Type of *Solanum tuberosum* nursery stock approved for entry into New Zealand**

Plants in tissue culture

*Solanum tuberosum* can be imported into New Zealand as plants in tissue culture from any country.

### **2. Pests of *Solanum tuberosum***

Refer to the pest list.

### **3. Entry conditions for:**

#### **3.1 *Solanum tuberosum* plants in tissue culture from offshore MAF-accredited facilities in any country**

##### **(i) Documentation**

**Import permit is required**

**Declaration for genetically modified organisms is required:** Refer to section 5 of this schedule for details.

**Phytosanitary requirements:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Solanum tuberosum* plants in tissue culture exported to New Zealand.

##### **(ii) Special tissue culture media requirements**

The tissue culture media must not contain charcoal.

##### **(iii) Phytosanitary requirements**

Before a phytosanitary certificate is issued, the exporting country national plant protection organisation (NPPO) must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken:

The *Solanum tuberosum* tissue cultures in the consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the MAF-accredited facility.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification.

##### **(iv) Additional declarations to the phytosanitary certificate**

“The *Solanum tuberosum* tissue cultures in this consignment have been:

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of MAF-accredited facility];

AND

- have been held in a manner to ensure infestation/reinfestation does not occur following

inspection and testing at the accredited facility, and certification.”

(v) Inspection, testing and treatments of the consignment

For all imported *Solanum tuberosum* tissue cultures, MAF reserves the right to validate all testing and audit all treatment processes that are undertaken by a facility accredited by MAF for testing/treatment purposes. This applies to MAF-accredited facilities offshore and within New Zealand. Audits will be conducted on a regular basis and at the expense of the importer.

(vi) Post-entry quarantine

**PEQ:** Not required

### **3.2 *Solanum tuberosum* plants in tissue culture from non-accredited facilities in any country**

(i) Documentation

**Import permit is required**

**Declaration for genetically modified organisms is required:** Refer to section 5 for details.

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the exporting country national plant protection organisation (NPPO) must accompany all *Solanum tuberosum* plants in tissue culture exported to New Zealand.

(ii) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

The exporting country NPPO must be satisfied that the requirements of the model phytosanitary certificate have been met before the phytosanitary certificate is issued.

(iv) Additional declarations to the phytosanitary certificate

There are no additional declarations to the phytosanitary certificate.

(v) Inspection, testing and treatments of the consignment

Upon arrival, the inspection, treatment and testing requirements for specified pests must be undertaken at a New Zealand Level 3 MAF-accredited facility. Refer to *Solanum tuberosum* Inspection and Testing Requirements following the *Solanum tuberosum* pest list.

(vi) Post-entry quarantine

**PEQ:** Level 3

**Quarantine Period:** Tissue cultures must be exflasked into the greenhouse for the quarantine period. 3 months is an indicative minimum quarantine period; this is the time required to complete inspections and/or indexing to detect regulated pests. The quarantine period may be extended if material is slow growing, pests are detected or additional treatments/testing are required.

#### **4. Validation of test results and audit of treatments at MAF-accredited laboratories or facilities**

For all imported *Solanum tuberosum* plants in tissue culture, MAF reserves the right to validate all testing and audit all treatment processes that are undertaken by a facility accredited by MAF for testing/treatment purposes. This applies to MAF-accredited facilities offshore and within New Zealand. Audits will be conducted on a regular basis and at the expense of the importer.

#### **5. Declaration for genetically modified organisms**

All import permit applications must include a signed declaration that the *Solanum tuberosum* plants in tissue culture are not genetically modified organisms, as defined by the New Zealand Hazardous Substances and New Organisms Act 1996 (HSNO Act, 1996).

For a copy of the declaration form refer to the end of this schedule.

## Pest List for *Solanum tuberosum*

### REGULATED PESTS (actionable)

#### Mite

#### Arachnida

#### Acarina

#### Tetranychidae

*Tetranychus evansi*

tetranychid mite

#### Fungi

#### Chytridiomycota

#### Chytridiales

#### Synchytriaceae

*Synchytrium endobioticum* [official control]

potato wart

#### Mitosporic Fungi (Coelomycetes)

#### Sphaeropsidales

#### Sphaerioidaceae

*Phoma andigena* var. *andina*

phoma leaf spot

#### Mitosporic Fungi

#### Unknown Mitosporic Fungi

#### Unknown Mitosporic Fungi

*Aecidium cantensis*

deforming rust

#### Oomycota

#### Pythiales

#### Pythiaceae

*Phytophthora infestans* [A2 mating strain]

late blight

#### Bacteria

#### Corynebacteriaceae

*Clavibacter michiganensis* subsp. *sepedonicus*

potato ring rot

#### Enterobacteriaceae

*Erwinia carotovora* subsp. *betavasculorum*

bacterial sudden yellows death

*Erwinia chrysanthemi* pv. *chrysanthemi*

bacterial soft rot

*Erwinia chrysanthemi* pv. *paradisiaca*

-

*Erwinia chrysanthemi* pv. *parthenii*

-

#### Viroids

*Columnnea latent viroid*\*

-

*Potato spindle tuber viroid* [transient]

-

*Tomato chlorotic dwarf viroid*\*

-

*Tomato planta macho viroid*\*

-

#### Viruses

*Abutilon mosaic begomovirus*\*

-

*Arracacha A nepovirus*\*

-

*Arracacha B nepovirus*

-

*Asparagus 3 potexvirus*\*

-

*Beet curly top curtovirus*

-

*Cassava green mottle nepovirus*\*

-

*Cassia mild mosaic carlavirus*\*

-

*Eggplant mosaic tymovirus*\*

-

*Eggplant mottled dwarf nucleorhabdovirus*

-

*Henbane mosaic potyvirus*\*

-

*Melilotus mosaic potyvirus*\*

-

*Pelargonium line pattern carmovirus*\*

-

*Pepino mosaic potexvirus*\*

-

*Pepper veinal mottle potyvirus*\*

-

*Potato 14R tobamovirus*

-

*Potato Andean latent tymovirus*

-

<i>Potato Andean mottle comovirus</i>	-
<i>Potato black ringspot nepovirus</i>	-
<i>Potato deforming mosaic begomovirus</i>	-
<i>Potato latent carlavirus</i>	-
<i>Potato mop-top furovirus</i>	-
<i>Potato P carlavirus</i>	-
<i>Potato rough dwarf carlavirus</i>	-
<i>Potato T trichovirus</i>	-
<i>Potato U nepovirus</i>	-
<i>Potato V potyvirus</i>	-
<i>Potato Y potyvirus</i> [strains not in New Zealand]	-
<i>Potato yellow dwarf nucleorhabdovirus</i>	-
<i>Potato yellow mosaic begomovirus</i>	-
<i>Potato yellow vein crinivirus</i>	-
<i>Potato yellowing alfamovirus</i>	-
<i>Solanum apical leaf curling begomovirus</i>	-
<i>Solanum yellows luteovirus</i>	-
<i>Southern potato latent carlavirus</i>	-
<i>Sowbane mosaic sobemovirus</i>	-
<i>Tobacco etch potyvirus*</i>	-
<i>Tobacco necrosis necrovirus</i> [strains not in New Zealand]	-
<i>Tobacco necrotic dwarf luteovirus*</i>	-
<i>Tobacco rattle tobnavirus</i> [strains not in New Zealand]	-
<i>Tobacco streak ilarvirus</i> [strains not in New Zealand]	-
<i>Tobacco stunt varicosavirus*</i>	-
<i>Tomato black ring nepovirus</i>	-
<i>Tomato bushy stunt tombusvirus*</i>	-
<i>Tomato infectious chlorosis crinivirus</i>	-
<i>Tomato leaf curl begomovirus - Australia*</i>	-
<i>Tomato leaf curl begomovirus - New Delhi</i>	-
<i>Tomato top necrosis nepovirus*</i>	-
<i>Tomato yellow leaf curl begomovirus</i>	-
<i>Tomato yellow mosaic begomovirus</i>	-
<i>Tomato yellow vein streak begomovirus*</i>	-
<i>Wild potato mosaic potyvirus</i>	-

#### **Phytoplasmas**

Eggplant little leaf phytoplasma	-
Peanut witches' broom*	-
Potato marginal flavescence	-
Potato phyllody phytoplasma	-
Potato purple-top roll phytoplasma	-
Potato purple-top wilt phytoplasma	-
Potato round leaf phytoplasma	-
Potato stolbur phytoplasma	-
Potato witches' broom phytoplasma	-
Saq'O disease	-

**Note: \* Pathogens that infect *Solanum tuberosum* experimentally (i.e. not yet found to infect potato naturally under field conditions).**

## Inspection and Testing Requirements for MAF-accredited facilities, for *Solanum tuberosum*

ORGANISM TYPES	ACCEPTABLE METHODS (See Note 6 at the end of this table).	Comments
<b>Mites</b>	Binocular microscope inspection.	
<b>Fungi</b>		
<i>Aecidium cantensis</i>	Growing season inspection in PEQ for symptom expression.	
<i>Phoma andigena</i> var. <i>andina</i>	Growing season inspection in PEQ for symptom expression.	
<i>Phytophthora infestans</i> (A2 mating strain)	Growing season inspection in PEQ for symptom expression.	
<i>Synchytrium endobioticum</i> [official control]	Growing season inspection in PEQ for symptom expression.	<i>S. endobioticum</i> cannot be cultured. It is identified by microscopic examination of affected plants. This organism belongs to the Myxomycetes in the Kingdom Protozoa.
<b>Bacteria</b>		
<i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i>	Growing season inspection in PEQ for symptom expression AND Immunofluorescence (monoclonal antibody, clone 9A1, Agdia) OR ELISA AND grow plantlets on Murashige and Skoog medium (see note 18) OR PCR (Patrik 2000) AND grow plantlets on Murashige and Skoog medium (see note 18).	
<i>Erwinia carotovora</i> subsp. <i>betavascularum</i>	Growing season inspection in PEQ for symptom expression AND plating on selective pectate media e.g. crystal violet pectate medium.	Possible synonym <i>Pectobacterium betavascularum</i> (Gardan <i>et al.</i> , 2003). The taxonomy is in dispute.  These testing methods will only detect to the species level. Further identification required for subspecies.
<i>Erwinia chrysanthemi</i> pv. <i>chrysanthemi</i>	Growing season inspection in PEQ for symptom expression AND plating on selective pectate media.	These testing methods will only detect to the species level. Further identification required for subspecies.
<i>Erwinia chrysanthemi</i> pv. <i>paradisiaca</i>	Growing season inspection in PEQ for symptom expression AND plating on selective pectate media.	These testing methods will only detect to the species level. Further identification required for subspecies.
<i>Erwinia chrysanthemi</i> pv. <i>parthenii</i>	Growing season inspection in PEQ for symptom expression AND plating on selective pectate media.	These testing methods will only detect to the species level. Further identification required for subspecies.
<b>Viroid</b>		

<b>ORGANISM TYPES</b>	<b>ACCEPTABLE METHODS</b> (See Note 6 at the end of this table).	<b>Comments</b>
Potato spindle tuber viroid [transient]	PCR using two sets of primers (e.g. Shamloul <i>et al.</i> 1997 and Nakahara <i>et al.</i> 1999) OR Return PAGE (with silver staining) OR Hybridisation (P32 or digoxigenin labelled RNA probes).	
<b>Viruses</b>		
Arracacha B nepovirus	ELISA AND herbaceous indicators Ca (4 plants) AND TEM.	Sap transmitted with difficulty. ELISA must detect the oca strain
Beet curly top curtovirus	PCR using primers of Rojas <i>et al.</i> 1993 AND TEM.	Cannot be transmitted by sap inoculation
Eggplant mottled dwarf nucleorhabdovirus	Herbaceous indicators Nb, Nc, Nd AND TEM.	
Potato 14R tobamovirus	Growing season inspection in PEQ for symptom expression.	Not fully characterised.
Potato Andean latent tymovirus	ELISA AND herbaceous indicators Nb, No AND TEM.	
Potato Andean mottle comovirus	ELISA AND herbaceous indicators Nc, Nd AND TEM.	
Potato black ringspot nepovirus	ELISA AND herbaceous indicators Cq, No AND TEM.	
Potato deforming mosaic begomovirus	PCR using universal primers of Rojas <i>et al.</i> (1993) or Wyatt and Brown (1996) OR the universal ELISA for begomoviruses (Agdia) AND TEM.	Virus not transmitted by sap inoculation.
Potato latent carlavirus	PCR using universal primers for carlavirus (Badge <i>et al.</i> 1996) AND TEM.	The use of indicator plants is unreliable.
Potato mop-top furovirus	ELISA AND herbaceous indicators Ca, Cq, Nd AND TEM.	ELISA can be used to detect the virus in indicator plants but may not be reliable for potato in which virus is usually in low concentration or erratically distributed.
Potato P carlavirus	PCR using universal primers for carlavirus (Badge <i>et al.</i> 1996) AND TEM.	Infected indicator plants do not produce symptoms.
Potato rough dwarf carlavirus	PCR using universal primers for carlavirus (Badge <i>et al.</i> 1996) AND TEM.	Sap inoculation of indicator plants is unreliable.
Potato T trichovirus	Herbaceous indicators Ca, Cq AND ELISA AND TEM.	
Potato U nepovirus	Herbaceous indicators Ca, Cq AND TEM.	Transmitted by sap with difficulty.
Potato V potyvirus	General potyvirus ELISA or PCR using universal potyvirus primers (Langeveld <i>et al.</i> 1991 or Pappu <i>et al.</i> 1993 or Gibbs & Mackenzie 1997) AND TEM.	
Potato Y potyvirus [strains not in NZ]	General potyvirus ELISA or PCR using universal potyvirus primers (Langeveld <i>et al.</i> 1991 or Pappu <i>et al.</i> 1993 or Gibbs & Mackenzie 1997) AND herbaceous indicators Nb, No AND TEM.	
Potato yellow dwarf nucleorhabdovirus	Herbaceous indicators Nc (4 plants) AND TEM.	
Potato yellow mosaic begomovirus	Herbaceous indicators Nb, Nt AND TEM.	

<b>ORGANISM TYPES</b>	<b>ACCEPTABLE METHODS</b> (See Note 6 at the end of this table).	<b>Comments</b>
Potato yellow vein crinivirus	PCR or hybridisation according to Salazar <i>et al.</i> 2000 AND TEM.	Crinivirus cannot be transmitted by sap inoculation.
Potato yellowing alfamovirus	ELISA AND TEM.	Transmission may be unreliable by sap inoculation.
Solanum apical leaf curling begomovirus	Growing season inspection in PEQ for symptom expression.	Cannot be transmitted by sap inoculation. Tentative species in begomovirus genus
Solanum yellows luteovirus	Growing season inspection in PEQ for symptom expression.	
Southern potato latent ?carlavirus	Growing season inspection in PEQ for symptom expression.	Tentative member of carlavirus family.
Sowbane mosaic sobemovirus	Herbaceous indicators Cq, Ca AND TEM.	
Tobacco necrosis necrovirus [strains not in New Zealand]	Herbaceous indicators Ca, Cq, Nc AND TEM.	Tobacco necrosis virus A Tobacco necrosis virus B
Tobacco rattle tobnavirus [strains not in New Zealand]	PCR AND herbaceous indicators Ca, Nc AND TEM.	Serological detection is unreliable because of diversity in the particle proteins of different isolates.
Tobacco streak ilarvirus [strains not in New Zealand]	Herbaceous indicators Nt (4 plants) AND TEM.	Potato strain SB10 infects potato naturally.
Tomato black ring nepovirus	ELISA AND herbaceous indicators Ca, Cq, Nc AND TEM.	Considerable antigenic variation therefore use mixture of antibodies to the two main serotypes – potato bouquet and pseudo aucuba strains and the beet ringspot strain.
Tomato infectious chlorosis crinivirus	PCR using method of Li <i>et al.</i> (1998) AND TEM.	Cannot be transmitted by sap inoculation.
Tomato leaf curl begomovirus – New Delhi	Herbaceous indicators Nb (4 plants) AND TEM.	Potato leaf curl is a new disease in northern India caused by a strain of Tomato leaf curl new Delhi virus.  A rare example of a sap-transmissible begomovirus
Tomato yellow leaf curl begomovirus	PCR using universal primers of Rojas <i>et al.</i> (1993) or Wyatt and Brown (1996) OR the universal ELISA for begomoviruses (Agdia) AND TEM.	Transmitted poorly by sap inoculation.
Tomato yellow mosaic begomovirus	PCR using universal primers of Rojas <i>et al.</i> (1993) or Wyatt and Brown (1996) OR the universal ELISA for begomoviruses (Agdia) AND herbaceous indicators Nb, Nt AND TEM.	
Wild potato mosaic potyvirus	Herbaceous indicators Nc, No AND TEM.	
<b>Phytoplasmas</b>		
Eggplant little leaf phytoplasma	PCR using the universal phytoplasma primers fU5/rU3 (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 (Gundersen <i>et al.</i> 1996).	
Potato marginal flavescence	PCR using the universal phytoplasma primers fU5/rU3 (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 (Gundersen <i>et al.</i> 1996).	

<b>ORGANISM TYPES</b>	<b>ACCEPTABLE METHODS</b> (See Note 6 at the end of this table).	<b>Comments</b>
Potato phyllody phytoplasma	PCR using the universal phytoplasma primers fU5/rU3 (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 (Gundersen <i>et al.</i> 1996).	
Potato purple-top roll phytoplasma	PCR using the universal phytoplasma primers fU5/rU3 (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 (Gundersen <i>et al.</i> 1996).	
Potato purple-top wilt phytoplasma	PCR using the universal phytoplasma primers fU5/rU3 (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 (Gundersen <i>et al.</i> 1996).	
Potato round leaf phytoplasma	PCR using the universal phytoplasma primers fU5/rU3 (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 (Gundersen <i>et al.</i> 1996).	
Potato stolbur phytoplasma	PCR using the universal phytoplasma primers fU5/rU3 (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 (Gundersen <i>et al.</i> 1996).	
Potato witches' broom phytoplasma	PCR using the universal phytoplasma primers fU5/rU3 (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 (Gundersen <i>et al.</i> 1996).	
Saq'O disease	Growing season inspection in PEQ for symptom expression.	An unknown phytoplasma and a native strain of PLRV are associated with this disease. No appropriate detection methods are currently available for the disease-causing agent.

## **Viroids, viruses and phytoplasmas infecting potato experimentally**

**Note: \* Pathogens that are currently only known to infect *Solanum tuberosum* experimentally. Tests that would detect these pathogens are already being conducted elsewhere in this schedule.**

<b>ORGANISM TYPES</b>	<b>Comments</b>
Columnnea latent viroid*	No evidence that this viroid infects potato naturally.
Tomato chlorotic dwarf viroid*	Tests that would detect this viroid are already being conducted elsewhere in this schedule e.g. the herbaceous indicator Nd.
Tomato planta macho viroid*	No evidence that this viroid infects potato naturally (Galindo <i>et al.</i> 1982).
Abutilon mosaic begomovirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule e.g. the universal PCR or ELISA tests for begomoviruses.
Arracacha A nepovirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the herbaceous indicators Cq and Nc.
Asparagus 3 potexvirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicator Cq and Nc.

Cassava green mottle nepovirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the herbaceous indicators Cq and Nc.
Cassia mild mosaic carlavirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the universal PCR for carlaviruses.
Eggplant mosaic tymovirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicators Cq and Nc.
Henbane mosaic potyvirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the general potyvirus ELISA or PCR using universal potyvirus primers (Langeveld <i>et al.</i> 1991 or Pappu <i>et al.</i> 1993 or Gibbs & Mackenzie 1997).
Melilotus mosaic potyvirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicator Ca
Pelargonium line pattern carmovirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicators Cq and Ca.
Pepino mosaic potexvirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicator Nc.
Pepper veinal mottle potyvirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicators Nc and Ca and the general potyvirus PCR/ELISA.
Tobacco etch potyvirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicators Cq and Ca.
Tobacco necrotic dwarf luteovirus*	No appropriate test available.
Tobacco stunt varicosavirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicator Ca.
Tomato bushy stunt tombusvirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicators Cq and Nc.
Tomato leaf curl begomovirus - Australia*	Tests that would detect this virus are already being conducted elsewhere in this schedule e.g. the universal PCR or ELISA for begomovirus.
Tomato top necrosis nepovirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the indicator Cq.
Tomato yellow vein streak begomovirus*	Tests that would detect this virus are already being conducted elsewhere in this schedule, e.g. the universal PCR or ELISA for begomovirus.
Peanut witches' broom*	Tests that would detect this phytoplasma are already being conducted elsewhere in this schedule, e.g. the universal PCR for phytoplasma.

**Notes:**

1. Transmission electron microscopy (TEM) – each plant must be observed under the TEM for virus particles.
2. Indicator hosts: *Chenopodium amaranticolor* (Ca), *C. quinoa* (Cq), *Nicotiana*

*benthamiana* (Nb), *N. clevelandii* (Nc), *N. debneyii* (Nd), *N. occidentalis* P1 (No) and *N. tabacum* (cv White Burley) (Nt).

3. Enzyme linked immunosorbent assay (ELISA).
4. Polymerase chain reaction (PCR).
5. Polyacrylamide gel electrophoresis (PAGE).
6. With prior notification, MAF will accept other internationally recognised testing methods.
7. For bioassay and ELISA, plants must be sampled from at least two positions on every stem including a young, fully expanded leaflet at the top of each stem and an older leaflet from a midway position (Jeffries, 1998).
8. For the PSTVd PCR young actively growing leaf tissue must be used.
9. Indicator plants must be grown at an appropriate temperature prior to inoculation.
10. Indicator plants must be shaded for 12-24 hrs prior to inoculation.
11. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks.
12. Inspect potato plants at least once per week for signs of pest and disease.
13. Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection.
14. The unit for testing is an individual plantlet. Each single plantlet must be labelled individually and tested separately. Progeny derived from these units after arrival can be treated as equivalent.
15. PCR, hybridisation tests and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.
16. At least two plants of each indicator species stated must be used in mechanical inoculation tests, unless otherwise stated.
17. Plantlets in growth media must be de-flasked and grown in quarantine for virus disease testing.
18. *Clavibacter michiganensis* subsp. *sepedonicus* grows well in microplants on Murashige and Skoog media. However there are usually no symptoms in this phase even though there could be high populations of bacteria, after potting up symptoms develop quickly (Dr D. Stead, Central Science Laboratory (York, UK), pers. comm. 2002).
19. After plantlets are deflasked they must be grown in sterile potting mix.
20. Testing must be carried out on plants while they are still in active growth and before tubers form.
21. For the general potyvirus ELISA, it is important to check that the potyvirus to be tested for is detected by the antisera being used. Agdia state that their general potyvirus ELISA will detect all aphid-transmitted potyviruses.
22. *Erwinia carotovora* ssp. *carotovora*, *E. carotovora* ssp. *atroseptica* and *E. chrysanthemi* have recently been classified in the genus *Pectobacterium* as *P. ssp. carotovorum*, *P. carotovorum* ssp. *atrosepticum* and *P. chrysanthemi* (Hauben *et al.*, 1998; cited in Perombelon 2002).
23. Positive and negative controls must be used in ELISA.
24. Positive and negative controls (including a blank water control) must be used in PCR. Ideally internal positive controls and a negative plant control must also be used.

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## Appendix 1. Quarantine Tests for Potato Viruses and Viroid

(★ = accepted test, sp = specific ELISA, u = universal primers or ELISA)

Grey background = not easily mechanically transmissible.

Virus	PCR	ELISA	TEM	Ca	Cq	Nb	Nc	Nd	No	Nt
Arracacha B nepovirus		★ sp	★	★ 4 plants						
Beet curly top curtovirus	★ u		★							
Eggplant mottled dwarf nucleorhabdovirus			★			★	★	★		
Potato Andean latent tymovirus		★ sp	★			★			★	
Potato Andean mottle comovirus		★ sp	★				★	★		
Potato black ringspot nepovirus		★ sp	★		★				★	
Potato deforming mosaic begomovirus	★ u	★ u	★							
Potato latent carlavirus	★ u	★								
Potato mop top furovirus		★ sp	★	★	★			★		
Potato P carlavirus	★ u		★							
Potato rough dwarf carlavirus	★ u		★							
Potato spindle tuber viroid [transient]	★ sp or PAGE or hybridisation									
Potato T trichovirus		★ sp	★	★	★					
Potato U nepovirus			★	★	★					
Potato V potyvirus	★ u	★ u	★							
Potato Y potyvirus [strains not in New Zealand]	★ u	★ u	★			★			★	
Potato yellow dwarf nucleorhabdovirus			★				★ 4 plants			
Potato yellow mosaic begomovirus			★			★				★
Potato yellow vein crinivirus	★ sp or hybridisation		★							
Potato yellowing alfamovirus		★ sp	★							
Sowbane mosaic sobemovirus			★	★	★					
Tobacco necrosis necrovirus [strains not in New Zealand]			★	★	★		★			
Tobacco rattle tobnavirus [strains not in New Zealand]	★ sp		★	★			★			
Tobacco streak ilarvirus [strains not in New Zealand]			★							★ 4 plants
Tomato black ring nepovirus		★ sp	★	★	★		★			
Tomato infectious chlorosis crinivirus	★ sp		★							
Tomato leaf curl begomovirus -New Delhi			★			★ 4 plants				
Tomato yellow leaf curl begomovirus	★ u	★ u	★							
Tomato yellow mosaic begomovirus	★ u	★ u	★			★				★
Wild potato mosaic potyvirus			★				★		★	



**Ministry of Agriculture and Forestry**  
Te Manatu Ahuwhenua, Ngaherehere

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## **DECLARATION FOR GENETICALLY MODIFIED ORGANISMS**

I..... declare, pursuant to Section 123 of the New Zealand Hazardous Substances and New Organisms Act 1996, that the *Solanum tuberosum* plants in tissue culture being imported are not genetically modified organisms.

*genetically modified organism means, unless expressly provided otherwise by regulations, any organism in which any of the genes or any other genetic material have been modified by in vitro techniques or are inherited or otherwise derived, through any number of replications, from any genes or other genetic material which has been modified by in vitro techniques (as defined by the New Zealand HSNO Act 1996).*

Signed by (print name):

Company Name and Details (if appropriate):

Signature:

Date:

**Warning:** Any person knowingly importing a genetically modified organism without proper authorisation may, on conviction, be sentenced to a term of imprisonment and/or a fine not exceeding \$500,000.00. The making of this declaration does not provide an exemption from any provisions of the Hazardous Substances and New Organisms Act 1996.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Solidago*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

**Quarantine Pests:** Aster yellows phytoplasma, Uredinales; *Xylella fastidiosa*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

1. Additional declaration: "Aster yellows phytoplasma is not known to occur in \_\_\_\_ (the country or state where the plants were grown) \_\_\_\_".
2. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested or inspected and found free of Aster yellows phytoplasma".

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Syringa*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Virus & virus-like diseases

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Additional Declaration:**

“The plants were inspected during the growing season and no symptoms of viruses or virus-like diseases were detected”.

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2;

**PLUS**

**Additional Declaration:**

“The cultures have been derived from parent stock tested and found free of viruses or virus-like diseases”.

## *Tillandsia*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Tillandsia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

#### **A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

#### **B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Tricyrtis*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Tetranychus kanzawai*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Additional Declaration:**

"The plants have been dipped prior to export in dicofol at the rate of 0.7g a.i. per litre of water".

**B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Tritonia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Puccinia gladioli*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**Additional Declarations:**

"*Puccinia gladioli* is not known to occur in \_\_\_\_\_ (the country or state where the plants were grown) \_\_\_\_\_".

**OR**

"The plants were inspected during the growing season and *Puccinia gladioli* was not detected".

**B. For Dormant Bulbs (Corms) from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**No import permit is required.**

**PEQ:** None

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

**Additional Declaration(s):**

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

An import permit is required.

**OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Tulipa*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

### **1. Type of *Tulipa* nursery stock approved for entry into New Zealand**

Dormant bulbs

Plants in tissue culture

### **2. Pests of *Tulipa***

Refer to the pest list.

### **3. Entry conditions for:**

#### **3.1 *Tulipa* dormant bulbs from any country**

##### **(i) Documentation**

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

##### **(ii) Phytosanitary requirements**

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Tulipa* dormant bulbs have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests including *Fusarium oxysporum* f. sp. *tulipae* OR treated for regulated fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi (except *Fusarium oxysporum* f. sp. *tulipae*) OR treated for regulated nematodes and fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses.

AND

- treated for regulated insects and mites as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

##### **(iii) Additional declarations to the phytosanitary certificate**

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section, and by providing the following additional declaration to the phytosanitary certificate:

"The *Tulipa* dormant bulbs in this consignment have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests including *Fusarium oxysporum* f. sp. *tulipae*.

AND

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated nematodes and fungi [if applicable].

AND

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated bacteria and viruses."

(iv) Post-entry quarantine

**PEQ:** Level 1

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required. Cut flowers may receive biosecurity clearance while the imported plants remain in post-entry quarantine following inspection of the parent plants and with prior approval from a MAF Inspector.

### 3.2 *Tulipa* dormant bulbs from the Netherlands

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Tulipa* dormant bulbs have been:

- produced in accordance with the requirements of the Bloembollenkeuringsdienst (BKD) Class 1 bulb certification scheme.

AND

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated nematodes and fungi OR treated for regulated nematodes and fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a "Pest free area", "Pest free place of production" or "Pest free production site", free from regulated bacteria and viruses.

AND

- treated for regulated insects and mites as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section, and by providing the following additional declaration to the phytosanitary certificate:

"The *Tulipa* dormant bulbs in this consignment have been:

- produced in accordance with the requirements of the BKD Class 1 bulb certification scheme.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi [if applicable].

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses."

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed.

### 3.3 *Tulipa* plants in tissue culture from any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Tulipa* plants in tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from parent stock inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from parent stock tested using molecular/ serological methods [choose ONE option] and found free of *Tobacco rattle virus*, *Tomato black ring virus* and *Tomato bushy stunt virus*.

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declaration to the phytosanitary certificate:

"The *Tulipa* plants in tissue culture have been derived from parent stock:

- inspected in accordance with appropriate official procedures and found to be free of any

visually detectable regulated pests

AND

- tested using molecular/ serological methods [choose ONE option] and found free of *Tobacco rattle virus*, *Tomato black ring virus* and *Tomato bushy stunt virus*."

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed overseas. Alternatively the inspection and testing may be completed in post-entry quarantine upon arrival in New Zealand according to the following conditions:

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Tulipa*

## REGULATED PESTS (actionable)

### Insect

#### Insecta

##### Diptera

###### Anthomyiidae

*Delia antiqua*

onion maggot

##### Homoptera

###### Aphididae

*Rhopalosiphoninus staphyleae tulipaellus*

tulip leaf aphid

##### Orthoptera

###### Gryllotalpidae

*Gryllotalpa gryllotalpa*

mole cricket

##### Thysanoptera

###### Thripidae

*Taeniothrips eucharii*

oriental thrips

### Mite

#### Arachnida

##### Acarina

###### Eriophyidae

*Aceria tulipae* [vector]

wheat curl mite

### Nematode

#### Adenophorea

##### Dorylaimida

###### Longidoridae

*Xiphimena coxi*

dagger nematode

###### Trichodoridae

*Paratrichodorus pachydermus* [vector]

stubby root nematode

*Paratrichodorus teres*

stubby root nematode

*Trichodorus similis*

stubby root nematode

#### Secernentea

##### Tylenchida

###### Tylenchidae

*Ditylenchus dipsaci* [strains not in New Zealand]

stem and bulb nematode

### Fungus

#### Ascomycota

##### Leotiales

###### Sclerotiniaceae

*Sclerotinia bulborum*

black slime

*Sclerotinia galanthina*

bulb rot

#### Basidiomycota: Ustomycetes

##### Ustilaginales

###### Ustilaginaceae

*Ustilago tulipae*

smut

#### mitosporic fungi (Agonomycetes)

##### Agonomycetales

###### unknown Agonomycetales

*Rhizoctonia tuliparum*

basal rot

*Sclerotium perniciosum*

smoulder

*Sclerotium wakkeri*

blackleg

#### mitosporic fungi (Hyphomycetes)

##### Tuberculariales

###### Tuberculariaceae

*Fusarium oxysporum* f. sp. *tulipae*

fusarium bulb rot

**Bacterium****Corynebacteriaceae**

*Curtobacterium flaccumfaciens* pv. *oortii* yellow pock

**Virus**

*Cymbidium ringspot virus* -  
*Tobacco rattle virus* [strains not in New Zealand] -  
*Tomato black ring virus* -  
*Tomato bushy stunt virus* -  
*Tomato ringspot virus* [strains not in New Zealand] -  
*Tulip grey virus* (syn. *Tulip severe mosaic virus*) -  
*Tulip halo necrosis virus* -  
*Tulip mild mosaic virus* -  
*Tulip mild mottle mosaic virus* -  
*Wa tulip virus* -

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Ulmus*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Elm mosaic virus, Elm phloem necrosis; *Xylella fastidiosa*;  
*Phytophthora ramorum*

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. Whole Plants**

**PEQ:** Level 3

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.10)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.11)

**B. Tissue Cultures:**

**PEQ:** Level 3

**Minimum Period:** 3 months

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Vaccinium*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

These conditions do not apply to *Vaccinium macrocarpon*.

**1. Type of *Vaccinium* [excluding *Vaccinium macrocarpon*] nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

**2. Pests of *Vaccinium***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Vaccinium* cuttings and tissue culture from offshore MAF-accredited facilities in any country**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. The operator of the accredited facility must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Vaccinium*. Refer to the “*Vaccinium* Inspection, Testing and Treatment Requirements”.

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Vaccinium* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Vaccinium* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section and by providing the following additional declarations to the phytosanitary certificate:

"The *Vaccinium* cuttings / plants in tissue culture [choose ONE option] have been:

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification."

(iv) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(v) Post-entry quarantine

**PEQ:** All *Vaccinium* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON

*Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** The nursery stock will be grown for a minimum period of 6 months in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. Six months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.2 *Vaccinium* cuttings and tissue culture from non-accredited facilities in any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Vaccinium* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Vaccinium* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section. No additional declarations are required.

(iv) Post-entry quarantine

**PEQ:** All *Vaccinium* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON

*Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** The nursery stock will be grown for a minimum period of either 9 (tissue culture) or 16 months (cuttings) in post-entry quarantine. During this time it will be inspected, treated and/or tested for regulated pests as specified in the “Inspection, Testing and Treatment Requirements for *Vaccinium*”, at the expense of the importer. These times are indicative minimum quarantine periods and may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Vaccinium*

## REGULATED PESTS (actionable)

### Insect

#### Insecta

##### Coleoptera

###### Cerambycidae

*Oberea myops*

azalea stem borer

###### Chrysomelidae

*Altica sylvia*

blueberry flea beetle

*Rhabdopterus picipes*

cranberry rootworm

###### Curculionidae

*Anthonomus musculus*

cranberry weevil

*Conotrachelus nenuphar*

plum curculio

*Pseudanthonomus validus*

currant fruit weevil

###### Scarabaeidae

*Popillia japonica*

Japanese beetle

##### Diptera

###### Cecidomyiidae

*Contarinia vaccinii*

blueberry tip midge

###### Tephritidae

*Rhagoletis mendax*

blueberry maggot

##### Hemiptera

###### Coreidae

*Veneza phyllopus*

leaf-footed bug

##### Homoptera

###### Aphididae

*Illinoia borealis*

aphid

*Illinoia pepperi*

blueberry aphid

###### Cicadellidae

*Euscelis striatulus*

Blunt-nosed leafhopper

*Scaphytopius magdalenis*

sharpnosed leafhopper

##### Hymenoptera

###### Tenthredinidae

*Caliroa annulipes*

sawfly

*Neopareophora litura*

gooseberry sawfly

*Pristiphora idiota*

willow redgall sawfly

*Pristiphora mollis*

-

##### Lepidoptera

###### Arctiidae

*Hyphantria cunea*

fall webworm

###### Geometridae

*Itame ribearia*

currant spanworm

###### Noctuidae

*Acronicta tritona*

acronicta caterpillar

*Actebia fennica*

black army cutworm

###### Notodontidae

*Datana major*

azalea caterpillar

###### Pyralidae

*Acrobasis vaccinii*

cranberry fruitworm

###### Sphingidae

*Paonias astylus*

huckleberry sphinx

###### Tortricidae

*Archips rosanus*

rose leafroller

*Argyrotaenia velutinana*

red-banded leafroller

*Aroga triangularis*

leaf-tier

*Cheimophila salicella*

European carnation tortrix

*Choristoneura hebenstreitella*

tortricid

*Choristoneura rosaceana*

oblique-banded leafroller

<i>Cydia packardi</i>	cherry fruitworm
<i>Dichomeris vacciniella</i>	leaf tier
<i>Hendecaneura shawiana</i>	blueberry tip borer
<i>Spilonota ocellana</i>	eyespotted bud moth
<b>Thysanoptera</b>	
<b>Thripidae</b>	
<i>Catinathrips similis</i>	thrips
<i>Catinathrips vaccinicola</i>	thrips
<i>Frankliniella bispinosa</i>	flower thrips
<i>Frankliniella tritici</i>	eastern flower thrips
<i>Frankliniella vaccinii</i>	blueberry thrips
<i>Scirtothrips ruthveni</i>	-
<i>Taeniothrips vaccinophilus</i>	thrips
<b>Mite</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Eriophyidae</b>	
<i>Acalitus vaccinii</i>	blueberry bud mite
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Diaporthales</b>	
<b>Valsaceae</b>	
<i>Diaporthe vaccinii</i> (anamorph <i>Phomopsis vaccinii</i> )	twig blight
<b>Dothideales</b>	
<b>Botryosphaeriaceae</b>	
<i>Botryosphaeria corticis</i>	cane blight
<i>Botryosphaeria vaccinii</i> (anamorph <i>Phyllosticta elongata</i> )	--
<b>Polystomellaceae</b>	
<i>Dothidella vacciniicola</i>	twig canker
<b>Erysiphales</b>	
<b>Erysiphaceae</b>	
<i>Microsphaera vaccinii</i>	powdery mildew
<b>Hypocreales</b>	
<b>Hypocreaceae</b>	
<i>Calonectria ilicicola</i> (anamorph <i>Cylindrocladium crotalariae</i> )	root and stem rot
<b>Leotiales</b>	
<b>Leotiaceae</b>	
<i>Godronia cassandrae</i> (anamorph <i>Fusicoccum putrefaciens</i> )	foliage spot
<i>Godronia cassandrae</i> f. sp. <i>vaccinii</i>	cane canker
<b>Sclerotiniaceae</b>	
<i>Monilinia baccarum</i>	mummy berry
<i>Monilinia fructigena</i> (anamorph <i>Monilia fructigena</i> )	European brown rot
<i>Monilinia ledi</i>	twig blight
<i>Monilinia megalospora</i>	-
<i>Monilinia oxycocci</i>	-
<i>Monilinia urnula</i>	brown rot
<i>Monilinia vaccinii-corymbosi</i>	brown rot
<b>Phyllachorales</b>	
<b>Phyllachoraceae</b>	
<i>Ophiodothella vaccinii</i>	fly speck leaf spot
<b>Meliolales</b>	
<b>Meliolaceae</b>	
<i>Asteridiella exilis</i>	black mildew
<b>Rhizomatales</b>	
<b>Rhizomataceae</b>	
<i>Lophodermium hypophyllum</i>	-

<i>Lophodermium maculare</i>	leaf spot
<i>Rhytisma vaccinii</i>	tar leaf spot
<b>Basidiomycota: Basidiomycetes</b>	
<b>Agaricales</b>	
<b>Tricholomataceae</b>	
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	armillaria root rot
<i>Armillaria ostoyae</i>	armillaria root rot
<b>Basidiomycota: Teliomycetes</b>	
<b>Uredinales</b>	
<b>Pucciniastraceae</b>	
<i>Pucciniastrum goeppertianum</i>	rust
<b>Oomycota</b>	
<b>Pythiales</b>	
<b>Pythiaceae</b>	
<i>Phytophthora ramorum</i>	sudden oak death disease
<b>mitosporic fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Dothichiza caroliniana</i>	double leaf spot
<i>Coniothyrium vaccinicola</i>	brand canker
<i>Phoma vaccinii</i>	stem blight
<i>Piggotia vaccinii</i>	leaf spot
<i>Septoria albopunctata</i>	septoria spot
<i>Septoria vaccinii</i>	septoria spot
<b>unknown Coelomycetes</b>	
<b>unknown Coelomycetes</b>	
<i>Gloeosporium minus</i>	leaf spot and stem canker
<i>Leptothyrium conspicuum</i>	fly speck
<b>mitosporic fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	
<b>Moniliaceae</b>	
<i>Gloeocercospora inconspicua</i>	leaf spot
<i>Ramularia vaccinii</i>	leaf spot
<b>unknown Hyphomycetes</b>	
<b>unknown Hyphomycetes</b>	
<i>Aureobasidium vaccinii</i>	twig and leaf blight
<b>Bacterium</b>	
<b>Pseudomonadaceae</b>	
<i>Xylella fastidiosa</i>	Pierce's disease
<b>Rhizobiaceae</b>	
<i>Agrobacterium rubi</i>	cane gall
<b>Virus</b>	
<i>Blueberry leaf mottle virus</i>	-
<i>Blueberry red ringspot virus</i> (syn. <i>Cranberry ringspot virus</i> )	-
<i>Blueberry scorch virus</i>	-
<i>Blueberry shock virus</i>	-
<i>Blueberry shoestring virus</i>	-
<i>Peach rosette mosaic virus</i>	-
<i>Tobacco streak virus</i> [strains not in New Zealand]	-
<i>Tomato ringspot virus</i> [strains not in New Zealand]	-
<b>Phytoplasma</b>	
Blueberry stunt phytoplasma	-
Cranberry false blossom phytoplasma	-
Vaccinium witches' broom phytoplasma	-
<b>Disease of unknown aetiology</b>	
Blueberry fruit drop disease	-
Blueberry mosaic disease	-

## Inspection, Testing and Treatment Requirements for *Vaccinium*

ORGANISM TYPES	MAF-ACCEPTED METHODS (See notes below)
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions)
<b>Mite</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions)
<b>Fungi</b>	Growing season inspection in PEQ for disease symptom expression.
<b>Bacterium</b>	
<i>Agrobacterium rubi</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Xylella fastidiosa</i>	Growing season inspection in PEQ for disease symptom expression AND PCR
<b>Virus</b>	
<i>Blueberry leaf mottle virus</i>	Herbaceous indicators Cq and Nc AND ELISA or PCR AND TEM.
<i>Blueberry red ringspot virus</i> (syn. <i>Cranberry ringspot virus</i> )	ELISA or PCR AND TEM.
<i>Blueberry scorch virus</i>	Herbaceous indicator Cq AND ELISA or PCR AND TEM.
<i>Blueberry shock virus</i>	Herbaceous indicators Nc and Nt AND ELISA or PCR AND TEM.
<i>Blueberry shoestring virus</i>	ELISA or PCR AND TEM.
<i>Peach rosette mosaic virus</i>	Herbaceous indicators Cq and Nt AND ELISA or PCR AND TEM.
<i>Tobacco streak virus</i> [strains not in New Zealand]	Herbaceous indicators Cq and Nt AND ELISA or PCR AND TEM.
<i>Tomato ringspot virus</i> [strains not in New Zealand]	Herbaceous indicators Cq and Nt AND ELISA or PCR AND TEM.
<b>Phytoplasmas</b>	
Blueberry stunt phytoplasma	PCR using the universal phytoplasma fU5/rU3 primers (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 primers (Gundersen <i>et al.</i> 1996).
Cranberry false blossom phytoplasma	PCR using the universal phytoplasma fU5/rU3 primers (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 primers (Gundersen <i>et al.</i> 1996).
<i>Vaccinium</i> witches' broom phytoplasma	PCR using the universal phytoplasma fU5/rU3 primers (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 primers (Gundersen <i>et al.</i> 1996).
<b>Disease of unknown aetiology</b>	
Blue berry fruit drop disease	Growing season inspection in PEQ for disease symptom expression.
Blueberry mosaic disease	Growing season inspection in PEQ for disease symptom expression.

### Notes:

- The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
- Transmission electron microscopy (TEM); in the spring, leaves from grafted cuttings or tissue culture must be observed under the electron microscope for virus particles.
- Herbaceous indicator hosts: *Chenopodium quinoa* (Cq), *Nicotiana clevelandii* (Nc) and *Nicotiana tabacum* (Nt). At least two plants of each herbaceous indicator species must be used in each test. Tests are to be carried out using the new season's growth in the spring. Plants shall be sampled from at least two positions on every stem including a young, fully expanded leaf at the top of each stem and an older leaf from a midway position. Herbaceous indicator plants must be grown under appropriate temperatures and must be shaded for 24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
- Enzyme linked immunosorbent assay (ELISA) and PCR tests for viruses. Tests are to be carried out using the new season's growth from grafted cuttings or tissue culture in the spring. Plants shall be sampled from at least two positions including a young, fully expanded leaf at the top of the stem and an older leaf from a midway position.

5. All PCR and ELISA tests must be validated using positive controls prior to use in quarantine testing. Positive and negative controls (including a blank water control for PCR) must be used in all tests. Ideally positive internal controls and a negative plant control should also be used in PCR tests.
6. Inspect *Vaccinium* plants for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.
7. With prior notification, MAF will accept other internationally recognised testing methods.

### **References**

- Gundersen, D.E., Lee, I.M. 1996. Ultrasensitive detection of phytoplasmas by nested-PCR assays using two universal primer pairs. *Phytopathologia Mediterranea* 35: 144-151.
- Lorenz, K.H., Scheider, B., Ahrens, U., Seemuller, E. 1995. Detection of the Apple proliferation and Pear decline phytoplasmas by PCR Amplification of ribosomal and nonribosomal DNA. *Phytopathology* 85: 771-776.

## *Vaccinium macrocarpon*

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Vaccinium macrocarpon*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Vaccinium macrocarpon* nursery stock approved for entry into New Zealand**  
Cuttings (dormant); Plants in tissue culture

**2. Pests of *Vaccinium macrocarpon***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Vaccinium macrocarpon* cuttings and tissue culture from offshore MAF-accredited facilities in any country**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. The operator of the accredited facility must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Vaccinium macrocarpon*. Refer to the “*Vaccinium macrocarpon* Inspection, Testing and Treatment Requirements”.

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Vaccinium macrocarpon* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Vaccinium macrocarpon* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility]

AND

- held in a manner to ensure that infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section and by providing the following additional declarations to the phytosanitary certificate:

"The *Vaccinium macrocarpon* cuttings / plants in tissue culture [choose ONE option] have been

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification."

(iv) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(v) Post-entry quarantine

**PEQ:** All *Vaccinium macrocarpon* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** The nursery stock will be grown for a minimum period of 6 months in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. Six months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### **3.2 *Vaccinium macrocarpon* cuttings and tissue culture from non-accredited facilities in any country**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Vaccinium macrocarpon* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Vaccinium macrocarpon* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following

certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section. No additional declarations are required.

(iv) Post-entry quarantine

**PEQ:** All *Vaccinium macrocarpon* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator*.

**Quarantine Period and Inspection, Testing and Treatment Requirements:** The nursery stock will be grown for a minimum period of either 9 (tissue culture) or 16 months (cuttings) in post-entry quarantine. During this time it will be inspected, treated and/or tested for regulated pests as specified in the “Inspection, Testing and Treatment Requirements for *Vaccinium macrocarpon*”, at the expense of the importer. These times are indicative minimum quarantine periods and may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Vaccinium macrocarpon*

## REGULATED PESTS (actionable)

### Insect

#### Insecta

##### Coleoptera

###### Chrysomelidae

*Rhabdopterus picipes* cranberry rootworm

###### Curculionidae

*Anthonomus musculus* cranberry weevil

*Pseudanthonomus validus* currant fruit weevil

###### Scarabaeidae

*Popillia japonica* Japanese beetle

##### Diptera

###### Tephritidae

*Rhagoletis pomonella* apple maggot fly

##### Homoptera

###### Aphididae

*Aphis vaccinii* blueberry aphid

*Illinoia borealis* aphid

###### Cicadellidae

*Euscelis striatulus* Blunt-nosed leafhopper

##### Hymenoptera

###### Tenthredinidae

*Pristiphora idiota* willow redgall sawfly

##### Lepidoptera

###### Arctiidae

*Hyphantria cunea* fall webworm

###### Geometridae

*Itame ribearia* currant spanworm

###### Noctuidae

*Acronicta tritona* acronicta caterpillar

*Actebia fennica* black army cutworm

###### Pyralidae

*Acrobasis vaccinii* cranberry fruitworm

###### Tortricidae

*Archips rosanus* rose leafroller

*Argyrotaenia velutinana* red-banded leafroller

*Aroga trialbamaculella* leaf tier

*Choristoneura hebenstreitella* tortricid

*Choristoneura rosaceana* oblique-banded leafroller

*Dichomeris vacciniella* leaf tier

##### Thysanoptera

###### Thripidae

*Frankliniella vaccinii* blueberry thrips

### Mite

#### Arachnida

##### Acarina

###### Eriophyidae

*Acalitus vaccinii* blueberry bud mite

### Fungus

#### Ascomycota

##### Diaporthales

###### Valsaceae

*Diaporthe vaccinii* (anamorph *Phomopsis vaccinii*) twig blight

##### Dothideales

###### Botryosphaeriaceae

<i>Botryosphaeria vaccinii</i> (anamorph <i>Phyllosticta elongata</i> )	--
<b>Erysiphales</b>	
<b>Erysiphaceae</b>	
<i>Microsphaera vaccinii</i>	powdery mildew
<b>Leotiales</b>	
<b>Leotiaceae</b>	
<i>Godronia cassandrae</i> (anamorph <i>Fusicoccum putrefaciens</i> )	foliage spot
<i>Godronia cassandrae</i> f. sp. <i>vaccinii</i>	cane canker
<b>Sclerotiniaceae</b>	
<i>Monilinia fructigena</i> (anamorph <i>Monilia fructigena</i> )	European brown rot
<i>Monilinia oxycocci</i>	-
<b>Rhytismatales</b>	
<b>Rhytismataceae</b>	
<i>Lophodermium hypophyllum</i>	-
<i>Lophodermium maculare</i>	leaf spot
<i>Lophodermium oxycocci</i>	-
<b>Basidiomycota: Basidiomycetes</b>	
<b>Agaricales</b>	
<b>Tricholomataceae</b>	
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	armillaria root rot
<b>Basidiomycota: Teliomycetes</b>	
<b>Uredinales</b>	
<b>Pucciniastraceae</b>	
<i>Pucciniastrum goeppertianum</i>	rust
<b>Chytridiomycota</b>	
<b>Chytridiales</b>	
<b>Synchytriaceae</b>	
<i>Synchytrium vaccinii</i>	red leaf gall
<b>Mitosporic fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Coniothyrium vaccinicola</i>	brand canker
<i>Phoma vaccinii</i>	stem blight
<i>Septoria vaccinii</i>	septoria spot
<i>Strasseria oxycocci</i>	fruit rot
<b>unknown Coelomycetes</b>	
<b>unknown Coelomycetes</b>	
<i>Gloeosporium minus</i>	leaf spot and stem canker
<i>Leptothyrium conspicuum</i>	fly speck
<b>Oomycota</b>	
<b>Pythiales</b>	
<b>Pythiaceae</b>	
<i>Phytophthora ramorum</i>	Sudden Oak Death disease
<b>Bacterium</b>	
<b>Rhizobiaceae</b>	
<i>Agrobacterium rubi</i>	cane gall
<b>Virus</b>	
<i>Blueberry scorch virus</i>	
<i>Blueberry red ringspot virus</i> (syn. <i>Cranberry ringspot virus</i> )	-
<i>Tobacco streak virus</i> [strains not in New Zealand]	-
<b>Phytoplasma</b>	
Cranberry false blossom phytoplasma	-

## Inspection, Testing and Treatment Requirements for *Vaccinium macrocarpon*

ORGANISM TYPES	MAF-ACCEPTED METHODS (See notes below)
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions)
<b>Mite</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions)
<b>Fungi</b>	Growing season inspection in PEQ for disease symptom expression.
<b>Bacterium</b>	
<i>Agrobacterium rubi</i>	Growing season inspection in PEQ for disease symptom expression.
<b>Virus</b>	
<i>Blueberry scorch virus</i>	Herbaceous indicator Cq AND ELISA or PCR AND TEM.
<i>Blueberry red ringspot virus</i> (syn. <i>Cranberry ringspot virus</i> )	ELISA or PCR AND TEM.
<i>Tobacco streak virus</i> [strains not in New Zealand]	Herbaceous indicators Cq and Nt AND ELISA or PCR AND TEM.
<b>Phytoplasmas</b>	
Cranberry false blossom phytoplasma	PCR using the universal phytoplasma fU5/rU3 primers (Lorenz <i>et al.</i> 1995) AND R16F2n/R16R2 primers (Gundersen <i>et al.</i> 1996).

### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. Transmission electron microscopy (TEM); in the spring, leaves from grafted cuttings or tissue culture must be observed under the electron microscope for virus particles.
3. Herbaceous indicator hosts: *Chenopodium quinoa* (Cq) and *Nicotiana tabacum* (Nt). At least two plants of each herbaceous indicator species must be used in each test. Tests are to be carried out using the new season's growth in the spring. Plants shall be sampled from at least two positions on every stem including a young, fully expanded leaf at the top of each stem and an older leaf from a midway position. Herbaceous indicator plants must be grown under appropriate temperatures and must be shaded for 24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
4. Enzyme linked immunosorbent assay (ELISA) and PCR tests for viruses. Tests are to be carried out using the new season's growth from grafted cuttings or tissue culture in the spring. Plants shall be sampled from at least two positions including a young, fully expanded leaf at the top of the stem and an older leaf from a midway position.
5. All PCR and ELISA tests must be validated using positive controls prior to use in quarantine testing. Positive and negative controls (including a blank water control for PCR) must be used in all tests. Ideally positive internal controls and a negative plant control should also be used in PCR tests.
6. Inspect *Vaccinium macrocarpon* plants for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.
7. With prior notification, MAF will accept other internationally recognised testing methods.

### References

Bereswill S., Bugert P., Volksch B., Ullrich M., Bender C.L., Geider K. 1994. Identification and relatedness of coronatine-producing *Pseudomonas syringae* pathovars by PCR

- analysis and sequence determination of the amplification products. *Applied and Environmental Microbiology* 60: 2924-2930.
- Gundersen, D.E., Lee, I.M. 1996. Ultrasensitive detection of phytoplasmas by nested-PCR assays using two universal primer pairs. *Phytopathologia Mediterranea* 35: 144-151.
- Lorenz, K.H., Scheider, B., Ahrens, U., Seemuller, E. 1995. Detection of the Apple proliferation and Pear decline phytoplasmas by PCR Amplification of ribosomal and nonribosomal DNA. *Phytopathology* 85: 771-776.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Verbena*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Tetranychus kanzawai*, Uredinales

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Additional Declarations:**

1. "Rust diseases are not known to occur on \_ (the imported genus) \_ in \_ (the country in which the plants were grown) \_".
2. "The plants have been dipped prior to export in dicofol at the rate of 0.7g a.i. per litre of water".

**B. For Dormant Bulbs from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**No import permit is required.**

**PEQ:** None

“In addition to inspection of dormant bulbs prior to shipment, the crop from which the bulbs were derived was inspected during the growing season according to appropriate procedures, and considered free of quarantine pests, and practically free from other injurious pests.”

**OPTION 2:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**C. For Dormant Bulbs from Countries other than Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:**

**OPTION 1:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**OPTION 2:**

**PEQ:** Level 2

**Minimum Period:** 3 months

**D. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Viburnum*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom, USA.

**Quarantine Pests:** *Phytophthora ramorum*; Uredinales

**Entry Conditions:** **Basic**; with variations and additional conditions as specified below:

**A. For Cuttings and Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 3 months

1. Additional declaration: "Rust diseases of genus *Coleosporium* and *Cronatium* are not known to occur on \_\_\_\_\_(the host species being imported)\_\_\_\_\_ in \_\_\_\_\_ (the country in which the plants were grown) \_\_\_\_\_".

2. Conditions for *Phytophthora ramorum* (section 2.2.1.10)

**B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Vitis*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

#### **4. Type of *Vitis* nursery stock approved for entry into New Zealand**

Cuttings (dormant); Plants in tissue culture

*Vitis* can be imported into Level 2 post entry quarantine from MAF-accredited facilities, or into Level 3 post entry quarantine from non-accredited facilities.

#### **5. Pests of *Vitis***

Refer to the pest list.

#### **6. Entry conditions for:**

##### **3.1 *Vitis* cuttings and tissue culture from offshore MAF-accredited facilities in any country**

An offshore accredited facility is a facility that has been accredited to the MAF Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Vitis*, the accredited facility operator must also have an agreement with MAF on the phytosanitary measures to be undertaken for *Vitis*.

##### *(i) Documentation*

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Vitis* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

##### *(ii) Phytosanitary requirements*

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Vitis* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- sourced from either mother plants that have been kept in insect-proof plant houses or from open ground mother plants [cuttings only, choose ONE option].

AND

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section and by providing the following additional declarations to the phytosanitary certificate:

"The *Vitis* cuttings / plants in tissue culture [choose ONE option] have been:

- held and tested for/classified free from specified regulated pests as required in the agreement between MAF and the [name of the MAF-accredited facility].

AND

- sourced from mother plants that have been kept in insect-proof plant houses or sourced from open ground mother plants [cuttings only, choose ONE option].

AND

- held in a manner to ensure infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification."

(iv) Post-entry quarantine

**PEQ:** All *Vitis* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** Upon arrival cuttings will be dipped in 1% sodium hypochlorite for 2 minutes [cuttings only]. The nursery stock will be grown for a minimum period of either 6 months (plants in tissue culture and cuttings sourced from mother plants that have been kept in insect-proof plant houses) or 16 months (cuttings sourced directly from open ground mother plants) in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. These periods are indicative minimum quarantine periods and may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### 3.2 *Vitis* cuttings and tissue culture from non-accredited facilities in any country

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Vitis* nursery stock exported to New Zealand.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is to be issued, the exporting country NPPO must be satisfied that the following activities required by MAF have been undertaken.

The *Vitis* cuttings / plants in tissue culture [choose ONE option] have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- treated for regulated insects and mites as described in section 2.2.1.6 of the basic conditions within 7 days prior to shipment [cuttings only].

AND

- held in a manner to ensure that infestation/reinfestation does not occur following inspection and testing at the accredited facility, and certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section. No additional declarations are required.

(iv) Post-entry quarantine

**PEQ:** All *Vitis* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator.*

**Quarantine Period and Inspection, Testing and Treatment Requirements:** Upon arrival cuttings will be dipped in 1% sodium hypochlorite for 2 minutes [cuttings only]. The nursery stock will be grown for a minimum period of 16 months in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. Sixteen months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

# Pest List for *Vitis*

## REGULATED PESTS (actionable)

### Insect

### Insecta

#### Coleoptera

##### Bostrichidae

<i>Amphicerus bicaudatus</i>	apple twig borer
<i>Amphicerus bimaculatus</i>	bostrichid beetle
<i>Amphicerus cornutus</i>	-
<i>Apate congener</i>	-
<i>Apate monachus</i>	black borer
<i>Bostrychopsis jesuita</i>	large auger beetle
<i>Dexicrates robustus</i>	-
<i>Melalgus confertus</i>	branch and twig borer
<i>Micrapate scabrata</i>	-
<i>Neoterius mistax</i>	-
<i>Psoa quadrisignata</i>	-
<i>Schistocerus bimaculatus</i>	grape cane borer
<i>Scobicia declivis</i>	lead cable borer
<i>Xylopertha retusa</i>	wood boring beetle
<i>Xylopsocus gibbicollis</i>	-

##### Buprestidae

<i>Agrilus marginicollis</i>	flatheaded grape borer
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##### Carabidae

<i>Adoxus obscurus</i> [Animals Biosecurity]	-
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##### Cerambycidae

<i>Acalolepta vastator</i>	-
<i>Cerasphorus albofasciatus</i>	grape trunk borer

##### Chrysomelidae

<i>Altica chalybaea</i>	grape flea beetle
<i>Altica torquata</i>	grapevine flea beetle
<i>Bromius obscurus</i>	western grape rootworm
<i>Fidia viticida</i>	grape root worm
<i>Glyptoscelis squamulata</i>	grape bud beetle
<i>Haltica</i> spp.	-
<i>Monolepta australis</i>	red-shouldered leaf beetle

##### Coccinellidae

<i>Coccinella transversoguttata</i> [Animals Biosecurity]	-
<i>Midas pygmaeus</i> [Animals Biosecurity]	-
<i>Nephus reunioni</i> [Animals Biosecurity]	-
<i>Rhyzobius ruficollis</i> [Animals Biosecurity]	-
<i>Stethorus</i> spp. [Animals Biosecurity]	-

##### Curculionidae

<i>Bustomus setulosus</i>	brown weevil
<i>Craponius inaequalis</i>	grape curculio
<i>Dischista cinna</i>	flower beetle
<i>Eremnus atratus</i>	black weevil
<i>Eremnus cerealis</i>	western province grain worm
<i>Eremnus setulosus</i>	grey weevil
<i>Naupactus xanthographus</i>	fruit tree weevil
<i>Orthorhinus cylindrirostris</i>	elephant weevil
<i>Orthorhinus klugi</i>	immigrant acacia weevil
<i>Otiorhynchus cribricollis</i>	cribrate weevil
<i>Perperus</i> spp.	apple root weevils
<i>Platyaspistes glaucus</i>	-
<i>Platyaspistes venustus</i>	-
<i>Rhigopsis effracta</i>	-
<i>Tanyrhynchus carinatus</i>	bud nibbler

<b>Elateridae</b>	
<i>Limonius canus</i>	Pacific Coast wireworm
<b>Meloidae</b>	
<i>Mylabris oculata</i>	-
<b>Scarabaeidae</b>	
<i>Athlia rustica</i>	-
<i>Cotalpa ursina</i>	-
<i>Hoplia callipyge</i>	-
<i>Hoplia pubicollis</i>	-
<i>Macroductylus subspinosus</i>	rose chafer
<i>Pachnoda sinuata</i>	scarab beetle
<i>Popillia japonica</i>	Japanese beetle
<i>Schizonycha</i> sp.	cockchafer
<b>Scolytidae</b>	
<i>Scolytus japonicus</i>	Japanese bark beetle
<i>Xyleborus dispar</i>	ambrosia beetle
<i>Xyleborus semiopacus</i>	black twig borer
<b>Staphylinidae</b>	
<i>Oligota pygmaea</i> [Animals Biosecurity]	-
<b>Tenebrionidae</b>	
<i>Blapstinus</i> sp.	darkling beetle
<i>Coniontis parviceps</i>	-
<i>Metoponium abnorme</i>	-
<b>Diptera</b>	
<b>Cecidomyiidae</b>	
<i>Diadiplosis koebelei</i>	-
<b>Tachinidae</b>	
<i>Ollacheryphe aenea</i> [Animals Biosecurity]	-
<i>Sturmia harrisinae</i> [Animals Biosecurity]	-
<i>Voriella unisetata</i> [Animals Biosecurity]	-
<b>Hemiptera</b>	
<b>Anthocoridae</b>	
<i>Orius</i> sp. [Animals Biosecurity]	-
<b>Coreidae</b>	
<i>Anthocoris</i> sp.	-
<i>Mictis profana</i>	crusader bug
<b>Lygaeidae</b>	
<i>Nysius raphanus</i>	false chinch bug
<i>Nysius vinitor</i>	Rutherglen bug
<i>Oxycarenus arctatus</i>	coon bug
<b>Miridae</b>	
<i>Creontiades dilutus</i>	green mirid
<b>Pentatomidae</b>	
<i>Euschistus conspersus</i>	stink bug
<i>Oechalia schellenbergi</i> [Animals Biosecurity]	Schellenberg's soldier bug
<b>Pyrrhocoridae</b>	
<i>Dindymus versicolor</i>	harlequin bug
<b>Homoptera</b>	
<b>Aleyrodidae</b>	
<i>Aleurocanthus woglumi</i>	citrus blackfly
<i>Tetraleurodes vittatus</i>	-
<i>Trialeurodes vittata</i>	grape whitefly
<b>Aphididae</b>	
<i>Aphis illinoisensis</i>	grapevine aphid
<i>Aphis medicaginis</i>	-
<b>Asterolecaniidae</b>	
<i>Asterolecanium pustulans</i>	oleander pit scale
<b>Cerococcidae</b>	
<i>Asterococcus muratae</i>	pit scale
<b>Cicadellidae</b>	
<i>Acia lineatifrons</i>	leafhopper

<i>Carneocephala fulgida</i>	red-headed sharpshooter
<i>Carneocephala fulgida</i> [vector]	red-headed sharpshooter
<i>Dikrella cockerellii</i>	blackberry leafhopper
<i>Draeculacephala minerva</i>	green sharpshooter
<i>Draeculacephala minerva</i> [vector]	green sharpshooter
<i>Empoasca</i> sp.	green leafhopper
<i>Erythroneura comes</i>	eastern grape leafhopper
<i>Erythroneura elegantula</i>	western grape leafhopper
<i>Erythroneura variabilis</i>	variegated grape leafhopper
<i>Erythroneura ziczac</i>	-
<i>Graphocephala atropunctata</i>	leafhopper
<i>Graphocephala atropunctata</i> [vector]	blue-green sharpshooter
<i>Hordnia circellata</i>	-
<i>Scaphoideus titanus</i> [vector]	raspberry leafhopper
<b>Cicadidae</b>	
<i>Platypedia minor</i>	-
<i>Tettigades chilensis</i>	-
<b>Coccidae</b>	
<i>Ceroplastes rusci</i>	fig wax scale
<i>Eulecanium cerasorum</i>	calico scale
<i>Eulecanium pruinosum</i>	frosted scale
<i>Heliococcus bohemicus</i>	scale
<i>Parthenolecanium persicae</i>	European peach scale
<i>Pulvinaria betulae</i>	scale
<i>Pulvinaria innumerabilis</i>	cottony maple scale
<i>Pulvinaria vitis</i>	woolly vine scale
<b>Diaspididae</b>	
<i>Aonidiella inornata</i>	inornate scale
<i>Chrysomphalus aonidium</i>	Florida red scale
<i>Diaspidiotus uvae</i>	grape scale
<i>Oceanspidiotus spinosus</i>	armoured scale
<i>Parlatoria cinerea</i>	chaff scale
<i>Parlatoria oleae</i>	olive scale
<i>Pinnaspis strachani</i>	hibiscus snow scale
<i>Pseudaonidia trilobitiformis</i>	trilobite scale
<i>Pseudaulacaspis pentagona</i>	white peach scale
<i>Quadraspidiotus juglansregiae</i>	walnut scale
<i>Selenaspis articulatus</i>	West Indian red scale
<b>Margarodidae</b>	
<i>Eurhizococcus brasiliensis</i>	margarodid
<i>Icerya seychellarum</i>	Seychelles scale
<i>Margarodes capensis</i>	Seychelles fluted scale
<i>Margarodes greeni</i>	soft scale
<i>Margarodes meridionalis</i>	-
<i>Margarodes prieskaensis</i>	margarodid
<i>Margarodes trimeni</i>	margarodid
<i>Margarodes vitis</i>	-
<i>Margarodes vredendalensis</i>	margarodid
<b>Membracidae</b>	
<i>Ceresa bubalus</i>	tree hopper
<i>Spissistilus bisonia</i>	-
<i>Spissistilus festinus</i>	three-cornered alfalfa hopper
<b>Phylloxeridae</b>	
<i>Viteus vitifoliae</i> [strain]	grape phylloxera
<b>Pseudococcidae</b>	
<i>Maconellicoccus hirsutus</i>	pink hibiscus mealybug
<i>Planococcus ficus</i>	fig mealybug
<i>Pseudococcus capensis</i>	-
<i>Pseudococcus maritimus</i>	grape mealybug
<i>Rhizoecus kondonis</i>	Kondo mealybug
<b>Hymenoptera</b>	

<b>Aphelinidae</b>	
<i>Coccophagus caridei</i> [Animals Biosecurity]	-
<i>Coccophagus gurneyi</i> [Animals Biosecurity]	-
<b>Bethylidae</b>	
<i>Goniozus platynota</i> [Animals Biosecurity]	-
<b>Braconidae</b>	
<i>Apanteles harrisinae</i> [Animals Biosecurity]	-
<i>Bracon cushmani</i> [Animals Biosecurity]	-
<i>Dolichogenidea tasmanica</i> [Animals Biosecurity]	-
<b>Dryinidae</b>	
<i>Aphelepus albopictus</i> [Animals Biosecurity]	-
<b>Encyrtidae</b>	
<i>Acerophagus notativentris</i> [Animals Biosecurity]	-
<i>Anagyrus clauseni</i> [Animals Biosecurity]	-
<i>Anagyrus fusciventris</i> [Animals Biosecurity]	-
<i>Anagyrus pseudococci</i> [Animals Biosecurity]	-
<i>Leptomastix dactylopii</i> [Animals Biosecurity]	parasitic wasp
<i>Metaphycus flavus</i> [Animals Biosecurity]	-
<i>Pseudaphycus angelicus</i> [Animals Biosecurity]	-
<i>Zarhopalus corvinus</i> [Animals Biosecurity]	-
<b>Eulophidae</b>	
<i>Colpoclypeus florus</i> [Animals Biosecurity]	-
<b>Formicidae</b>	
<i>Anoplolepis steingroeveri</i> [Animals Biosecurity]	black ant
<i>Crematogaster peringueyi</i> [Animals Biosecurity]	cocktail ant
<i>Formica cinerea</i> [Animals Biosecurity]	ant
<i>Pogonomyrmex californica</i> [Animals Biosecurity]	California harvester ant
<i>Solenopsis xyloni</i> [Animals Biosecurity]	southern fire ant
<i>Veromessor pergandei</i> [Animals Biosecurity]	desert seed-harvester ant
<b>Ichneumonidae</b>	
<i>Campoplex capitator</i> [Animals Biosecurity]	-
<i>Dicaelotus inflexus</i> [Animals Biosecurity]	-
<b>Mymaridae</b>	
<i>Anagrus epos</i> [Animals Biosecurity]	-
<b>Pteromalidae</b>	
<i>Ophelosia charlesii</i> [Animals Biosecurity]	-
<i>Pachyneuron</i> sp. [Animals Biosecurity]	-
<b>Trichogrammatidae</b>	
<i>Trichogramma funiculatum</i> [Animals Biosecurity]	-
<i>Trichogrammatomyia tortricis</i> [Animals Biosecurity]	-
<b>Vespidae</b>	
<i>Polistes buysoni</i> [Animals Biosecurity]	-
<b>Isoptera</b>	
<b>Kalotermitidae</b>	
<i>Cryptotermes brevis</i>	West Indian drywood termite
<i>Kalotermes flavicollis</i>	termite
<i>Kalotermes minor</i>	-
<i>Neotermes chilensis</i>	termite
<b>Rhinotermitidae</b>	
<i>Coptotermes acinaciformis</i> [official control]	Australian subterranean termite
<i>Reticulitermes hesperus</i>	-
<b>Termopsidae</b>	
<i>Porotermes quadricollis</i>	-
<b>Lepidoptera</b>	
<b>Agaristidae</b>	
<i>Agarista agricola</i>	painted vine moth
<i>Heraclia superba</i>	grapevine zebra moth
<b>Arctiidae</b>	
<i>Estigmene acrea</i>	saltmarsh caterpillar
<i>Hyphantria cunea</i>	fall webworm
<i>Laora variabilis</i>	-

<i>Spilosoma virginica</i>	yellow woollybear
<i>Turuptiana obliqua</i>	tiger moth
<b>Cossidae</b>	
<i>Coryphodema tristis</i>	quince trunk borer
<i>Zeuzera coffeae</i>	red coffee borer
<b>Heliozelidae</b>	
<i>Antispila rivillei</i>	-
<b>Noctuidae</b>	
<i>Achaea</i> spp.	fruit-piercing moths
<i>Agrotis munda</i>	brown cutworm
<i>Alabama argillacea</i>	cotton leafworm
<i>Anomis mesogona</i>	hibiscus looper
<i>Anomis</i> spp.	-
<i>Calyptra</i> spp.	fruit-piercing moths
<i>Copitarsia consueta</i>	noctuid moth
<i>Eudocima</i> spp.	fruit-piercing moths
<i>Euxoa messoria</i>	darksided cutworm
<i>Euxoa ochrogaster</i>	redbacked cutworm
<i>Helicoverpa punctigera</i>	oriental tobacco budworm
<i>Mythimna</i> sp.	-
<i>Noctua fimbriata</i>	broad-bordered yellow underwing
<i>Noctua pronuba</i>	large yellow underwing
<i>Oraesia</i> spp.	fruit-piercing moths
<i>Orthodes rufula</i>	cutworm
<i>Peridroma margaritosa</i>	-
<i>Peridroma saucia</i>	variegated cutworm
<i>Protorthodes rufula</i>	-
<i>Serrododes</i> spp.	fruit-piercing moth
<i>Sphingomorpha</i> spp.	-
<i>Spodoptera littoralis</i>	cotton leafworm
<i>Xestia c-nigrum</i>	spotted cutworm
<b>Oecophoridae</b>	
<i>Echionima</i> sp.	-
<i>Maroga melanostigma</i>	fruit tree borer
<b>Psychidae</b>	
<i>Gymnelema plebigena</i>	bagworm
<b>Pterophoridae</b>	
<i>Geina periscelidactylus</i>	-
<b>Pyralidae</b>	
<i>Desmia funeralis</i>	grape leaf-folder
<i>Euzophera bigella</i>	quince moth
<i>Ostrinia nubilalis</i>	European corn borer
<b>Saturniidae</b>	
<i>Hemileuca eglanterina</i>	brown day-moth
<i>Hyalophora cecropia</i>	cecropia moth
<b>Sesiidae</b>	
<i>Vitacea polistiformis</i>	grape root borer
<b>Sphingidae</b>	
<i>Eumorpha achemon</i>	achemon sphinx
<i>Hippotion celerio</i>	grapevine hawk moth
<i>Hyles euphorbiae</i>	spurge hawk moth
<i>Hyles lineata</i>	whitelined sphinx
<i>Theretra capensis</i>	grapevine hawk moth
<i>Theretra oldenlandiae</i>	vine hawk moth
<b>Tortricidae</b>	
<i>Archips argyrospilus</i>	fruit tree leafroller
<i>Argyrotaenia citrana</i>	orange tortrix
<i>Argyrotaenia ljugiana</i>	grey red-barred tortrix
<i>Argyrotaenia velutinana</i>	red-banded leafroller
<i>Cryptophlebia leucotreta</i>	false codling moth
<i>Endopiza viteana</i>	-

<i>Eulia stalactitis</i>	-
<i>Eupoecilia ambiguella</i>	vine moth
<i>Lobesia botrana</i>	grape berry moth
<i>Paralobesia viteana</i>	grape berry moth
<i>Platynota stultana</i>	omnivorous leafroller
<i>Proeulia auraria</i>	grapevine leafroller
<i>Proeulia triqueta</i>	-
<b>Zygaenidae</b>	
<i>Harrisina americana</i>	grapeleaf skeletonizer
<i>Harrisina brillians</i>	western grapeleaf skeletonizer
<i>Theresimima ampelophaga</i>	zygaenid butterfly
<b>Neuroptera</b>	
<b>Chrysopidae</b>	
<i>Chrysopa oculata</i> [Animals Biosecurity]	-
<i>Chrysopa</i> spp. [Animals Biosecurity]	-
<b>Coniopterygidae</b>	
<i>Cryptoscenea australiensis</i> [Animals Biosecurity]	-
<b>Hemerobiidae</b>	
<i>Micromus</i> sp. [Animals Biosecurity]	-
<b>Orthoptera</b>	
<b>Acrididae</b>	
<i>Melanoplus femurrubrum</i>	red-legged grasshopper
<i>Melanoplus mexicanus devastator</i>	-
<i>Oedaleonotus enigma</i>	-
<i>Phaulacridium vittatum</i>	wingless grasshopper
<i>Schistocerca cancellata</i>	-
<i>Schistocerca shoshone</i>	-
<i>Schistocerca vaga</i>	-
<b>Gryllidae</b>	
<i>Acheta fulvipennis</i>	cricket
<i>Microgryllus pallipes</i>	cricket
<b>Tettigoniidae</b>	
<i>Caedicia</i> spp.	-
<i>Plangia graminea</i>	grasshopper
<b>Thysanoptera</b>	
<b>Phlaeothripidae</b>	
<i>Haplothrips victoriensis</i>	tubular black thrips
<b>Thripidae</b>	
<i>Caliothrips fasciatus</i>	bean thrip
<i>Drepanothrips reuteri</i>	grape thrips
<i>Frankliniella cestrum</i>	tomato thrips
<i>Frankliniella minuta</i>	minute flower thrips
<i>Frankliniella occidentalis</i> [pesticide resistant strain]	western flower thrips
<i>Heliothrips sylvanus</i>	thrips
<i>Rhipiphorothrips cruentatus</i>	leaf thrips
<i>Scirtothrips citri</i>	citrus thrips
<i>Scolothrips sexmaculatus</i> [Animals Biosecurity]	-
<b>Unknown Insecta</b>	
<b>Unknown Insecta</b>	
<i>Cryptolarynx vitis</i>	-
<i>Dytineis pulvinosus</i>	-
<b>Mite</b>	
<b>Arachnida</b>	
<b>Acarina</b>	
<b>Anystidae</b>	
<i>Anystis agilis</i> [Animals Biosecurity]	-
<b>Eriophyidae</b>	
<i>Colomerus vitis</i> [leaf curling strain]	grape erineum mite
<i>Phyllocoptes vitis</i>	eriophyid mite
<b>Phytoseiidae</b>	

<i>Amblyseius victoriensis</i> [Animals Biosecurity]	-
<i>Metaseiulus occidentalis</i> [Animals Biosecurity]	-
<i>Neoseiulus chilensis</i> [Animals Biosecurity]	predator mite
<i>Typhlodromus doreenae</i> [Animals Biosecurity]	-
<b>Tenuipalpidae</b>	
<i>Brevipalpus chilensis</i>	false spider mite
<i>Brevipalpus lewisi</i>	bunch mite
<i>Brevipalpus lilium</i>	false spider mite
<i>Brevipalpus obovatus</i>	privet mite
<i>Tenuipalpus granati</i>	false spider mite
<b>Tetranychidae</b>	
<i>Eotetranychus carpini</i>	tetranychid mite
<i>Eotetranychus pruni</i>	hickory scorch mite
<i>Eotetranychus smithi</i>	tetranychid mite
<i>Eotetranychus viticola</i>	tetranychid mite
<i>Eotetranychus willamettei</i>	hazel mite
<i>Eotetranychus yumensis</i>	Yumi spider mite
<i>Eutetranychus orientalis</i>	pear leaf blister mite
<i>Oligonychus coffeae</i>	tea red spider mite
<i>Oligonychus mangiferus</i>	mango spider mite
<i>Oligonychus peruvianus</i>	spider mite
<i>Oligonychus punicae</i>	avocado brown mite
<i>Oligonychus yothersi</i>	avocado red mite
<i>Tetranychus kanzawai</i>	kanzawa mite
<i>Tetranychus mcDanieli</i>	McDaniel spider mite
<i>Tetranychus pacificus</i>	Pacific spider mite
<b>Mollusc</b>	
<b>Gastropoda</b>	
<b>Stylommatophora</b>	
<b>Helicidae</b>	
<i>Ceruella virgata</i>	small banded snails
<i>Cochlicella barbara</i>	small pointed garden snail
<i>Theba pisana</i>	white Italian snail
<b>Fungus</b>	
<b>Ascomycota</b>	
<b>Caliciales</b>	
<b>Unknown Caliciales</b>	
<i>Roesleria pallida</i>	grape root rot
<b>Diaporthales</b>	
<b>Valsaceae</b>	
<i>Diaporthe rudis</i> (anamorph <i>Phomopsis rudis</i> )	phomopsis canker
<b>Dothideales</b>	
<b>Mycosphaerellaceae</b>	
<i>Guignardia bidwellii</i> (anamorph <i>Phyllosticta ampellicida</i> )	black rot
<i>Guignardia bidwellii</i> f. sp. <i>euvitis</i>	-
<i>Guignardia bidwellii</i> f. sp. <i>muscadinii</i>	-
<i>Mycosphaerella angulata</i> (anamorph <i>Cercospora brachypus</i> )	angular leaf spot
<b>Schizothyriaceae</b>	
<i>Schizothyrium pomi</i> (anamorph <i>Zygothiala jamaicensis</i> )	fly speck
<b>Hypocreales</b>	
<b>Hypocreaceae</b>	
<i>Cylindrocarpon destructans</i> var. <i>crassum</i>	root rot
<b>Leotiales</b>	
<b>Dermateaceae</b>	
<i>Pseudopezicula tetraspora</i>	angular leaf scorch
<i>Pseudopezicula tracheiphila</i>	rotbrenner

<b>Sclerotiniaceae</b>	
<i>Grovesinia pyramidalis</i> (anamorph <i>Cristulariella moricola</i> )	target spot
<b>Rhytismatales</b>	
<b>Rhytismataceae</b>	
<i>Rhytisma vitis</i>	tar spot
<b>Saccharomycetales</b>	
<b>Saccharomycetaceae</b>	
<i>Pichia membranaefaciens</i>	-
<b>Unknown Ascomycota</b>	
<b>Hyponectriaceae</b>	
<i>Physalospora baccae</i>	-
<b>Xylariales</b>	
<b>Xylariaceae</b>	
<i>Anthostomella pullulans</i>	Brulure
<b>Basidiomycota: Basidiomycetes</b>	
<b>Agaricales</b>	
<b>Tricholomataceae</b>	
<i>Armillaria mellea</i> (anamorph <i>Rhizomorpha subcorticalis</i> )	armillaria root rot
<i>Armillaria</i> sp.	armillaria root rot
<i>Armillaria tabescens</i>	armillaria root rot
<b>Ganodermatales</b>	
<b>Ganodermataceae</b>	
<i>Ganoderma lucidum</i> (anamorph <i>Polyporus lucidus</i> )	wood rot
<i>Ganoderma tsugae</i>	-
<b>Poriales</b>	
<b>Coriolaceae</b>	
<i>Bjerkandera adusta</i>	white rot
<i>Bjerkandera fumosa</i>	--
<b>Lentinaceae</b>	
<i>Pleurotus ostreatus</i>	wood decay
<b>Stereales</b>	
<b>Stereaceae</b>	
<i>Stereum</i> sp.	-
<b>Basidiomycota: Teliomycetes</b>	
<b>Uredinales</b>	
<b>Unknown Uredinales</b>	
<i>Physopella ampelopsidis</i>	grape rust
<b>Mitosporic Fungi</b>	
<b>Unknown Mitosporic Fungi</b>	
<b>Unknown Mitosporic Fungi</b>	
<i>Phacellium</i> sp.	-
<b>Mitosporic Fungi (Coelomycetes)</b>	
<b>Sphaeropsidales</b>	
<b>Sphaerioidaceae</b>	
<i>Ascochyta ampelina</i>	leaf spot
<i>Coniella diplodiella</i>	white rot
<i>Coniella petrakii</i>	white rot
<i>Phomopsis longiparaphysata</i>	phomopsis rot
<i>Pyrenochaeta vitis</i>	leaf spot
<i>Septoria ampelina</i>	septoria leaf spot
<b>Unknown Coelomycetes</b>	
<b>Unknown Coelomycetes</b>	
<i>Natrassia toruloidea</i>	leaf spot
<i>Pestalotia menezesiana</i>	fruit rot
<i>Pestalotia pezizoides</i>	fruit and leaf spot
<i>Pestalotiopsis mangiferae</i>	grey leaf spot of mango
<i>Pestalotiopsis uvicola</i>	fruit rot
<b>Mitosporic Fungi (Hyphomycetes)</b>	
<b>Hyphomycetales</b>	

<b>Dematiaceae</b>	
<i>Alternaria vitis</i>	leaf disease
<i>Phaeoramularia dissiliens</i>	cercospora leaf spot
<b>Moniliaceae</b>	
<i>Cephalosporium</i> sp.	--
<i>Penicillium aurantiogriseum</i>	penicillium rot
<i>Verticillium heterocladium</i>	-
<b>Unknown Hyphomycetes</b>	
<b>Unknown Hyphomycetes</b>	
<i>Briosia ampelophaga</i>	leaf blotch
<i>Candida krusei</i>	yeasty rot
<i>Candida steatolytica</i> [Animals Biosecurity]	-
<i>Oidium</i> sp.	powdery mildew
<i>Paecilomyces farinosus</i>	-
<i>Paecilomyces</i> spp.	-
<i>Phaeoacremonium aleophilum</i>	-
<i>Phaeoisariopsis</i> sp.	-
<i>Stigmia vitis</i>	leaf fall
<b>Bacterium</b>	
<b>Pseudomonadaceae</b>	
<i>Xanthomonas campestris</i> pv. <i>viticola</i>	bacterial canker
<i>Xylella fastidiosa</i>	Pierce's disease
<i>Xylophilus ampelinus</i>	bacterial blight
<b>Rhizobiaceae</b>	
<i>Agrobacterium rubi</i>	cane gall
<b>Virus</b>	
<i>Artichoke Italian latent virus</i>	-
<i>Broad bean wilt virus</i>	-
<i>Cherry leaf roll virus</i> [strains not in New Zealand]	-
<i>Grapevine Ajinashika disease virus</i>	-
<i>Grapevine Algerian latent virus</i>	-
<i>Grapevine angular mosaic virus</i>	-
<i>Grapevine asteroid mosaic-associated virus</i>	-
<i>Grapevine berry inner necrosis virus</i>	-
<i>Grapevine Bulgarian latent virus</i>	-
<i>Grapevine chrome mosaic virus</i>	-
<i>Grapevine fanleaf virus</i> [strains not in New Zealand]	-
<i>Grapevine labile rod-shaped virus</i>	-
<i>Grapevine leafroll-associated virus</i> [type 4]	-
<i>Grapevine leafroll-associated virus</i> [type 5]	-
<i>Grapevine leafroll-associated virus</i> [type 6]	-
<i>Grapevine leafroll-associated virus</i> [type 7]	-
<i>Grapevine leafroll-associated virus</i> [type 9]	-
<i>Grapevine line pattern virus</i>	-
<i>Grapevine red globe virus</i>	-
<i>Grapevine stunt virus</i>	-
<i>Grapevine Tunisian ringspot virus</i>	-
<i>Grapevine virus B</i> [strains not in New Zealand]	-
<i>Grapevine virus C</i>	-
<i>Grapevine virus D</i>	-
<i>Peach rosette mosaic virus</i>	-
<i>Petunia asteroid mosaic virus</i>	-
<i>Raspberry ringspot virus</i>	-
<i>Sowbane mosaic virus</i>	-
<i>Strawberry latent ringspot virus</i> [strains not in New Zealand]	-
<i>Tomato black ring virus</i>	-
<b>Viroid</b>	

*Australian grapevine viroid* -  
*Grapevine yellow speckle viroid 1* -  
*Grapevine yellow speckle viroid 2* -  
*Hop stunt viroid* -

**Phytoplasma**

Australian grapevine yellows phytoplasma -  
Grapevine bois noir phytoplasma -  
Grapevine flavescence doree phytoplasma -  
Grapevine yellows -  
Palatine grapevine yellows -  
Tomato big bud phytoplasma -  
Vergilbungskrankheit (German grapevine yellows) -

**Disease of unknown aetiology**

LN33 stem grooving -

## Inspection, Testing and Treatment Requirements for *Vitis*

ORGANISM TYPES	MAF-ACCEPTED METHODS (See notes below)
<b>Insects</b>	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.5 of the basic conditions) [cuttings only].
<b>Mites</b>	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.5 of the basic conditions) [cuttings only] or binocular microscope inspection in PEQ [plants in tissue culture only].
<b>Fungi</b>	Growing season inspection in PEQ for disease symptom expression AND examination using a dissecting microscope or hand lens (longitudinal and transverse sections) AND plating on potato dextrose agar.
<b>Bacterium</b>	
<i>Agrobacterium rubi</i> , <i>Xanthomonas campestris</i> pv. <i>viticola</i> and <i>Xilophilus</i> <i>ampelinus</i>	Growing season inspection in PEQ for disease symptom expression AND Hot water treatment (Refer to “Approved Treatments for <i>Vitis</i> ”).
<i>Xylella fastidiosa</i>	Growing season inspection in PEQ for disease symptom expression AND PCR (Two tests; Minsavage <i>et al.</i> , 1994) AND Hot water treatment (Refer to “Approved Treatments for <i>Vitis</i> ”).
<b>Virus</b>	
<i>Artichoke Italian latent virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Broad bean wilt virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Cherry leaf roll virus</i> [strains not in New Zealand]	ELISA or PCR AND herbaceous indicators ( <i>Chenopodium amaranticolor</i> , <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana tabacum</i> ).
<i>Grapevine Ajinashika disease virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine Algerian latent virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine angular mosaic virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine asteroid mosaic-associated virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine berry inner necrosis virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine Bulgarian latent virus</i>	Herbaceous indicators ( <i>Chenopodium amaranticolor</i> and <i>C. quinoa</i> ).
<i>Grapevine chrome mosaic virus</i>	PCR AND herbaceous indicators ( <i>Chenopodium amaranticolor</i> , <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana tabacum</i> ).
<i>Grapevine fanleaf virus</i> [strains not in New Zealand]	ELISA or PCR AND woody indicators (Saint George) or herbaceous indicators ( <i>Chenopodium amaranticolor</i> , <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> ).
<i>Grapevine labile rod-shaped virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine leafroll-associated virus</i> [type 4]	ELISA or PCR AND woody indicators (Cabernet Franc, Merlot or Pinot Noir).
<i>Grapevine leafroll-associated virus</i> [type 5]	ELISA or PCR AND woody indicators (Cabernet Franc, Merlot or Pinot Noir).
<i>Grapevine leafroll-associated virus</i> [type 6]	Woody indicators (Cabernet Franc, Merlot or Pinot Noir).
<i>Grapevine leafroll-associated virus</i> [type 7]	PCR AND woody indicators (Cabernet Franc, Merlot or Pinot Noir).
<i>Grapevine leafroll-associated virus</i> [type 9]	Woody indicators (Cabernet Franc, Merlot or Pinot Noir).
<i>Grapevine line pattern virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine red globe virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine stunt virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine Tunisian ringspot virus</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine virus B</i> [strains not in	PCR and woody indicators (LN33).

New Zealand]	
<i>Grapevine virus C</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Grapevine virus D</i>	PCR.
<i>Peach rosette mosaic virus</i>	ELISA or PCR AND herbaceous indicators ( <i>Chenopodium amaranticolor</i> , <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana tabacum</i> ).
<i>Petunia asteroid mosaic virus</i>	PCR or ELISA.
<i>Raspberry ringspot virus</i>	ELISA or PCR AND herbaceous indicators ( <i>Chenopodium amaranticolor</i> , <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana tabacum</i> ).
<i>Sowbane mosaic virus</i>	Herbaceous indicators ( <i>Chenopodium amaranticolor</i> and <i>C. quinoa</i> ).
<i>Strawberry latent ringspot virus</i> [strains not in New Zealand]	Herbaceous indicators ( <i>Chenopodium amaranticolor</i> , <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> ).
<i>Tomato black ring virus</i>	ELISA or PCR AND herbaceous indicators ( <i>Chenopodium amaranticolor</i> , <i>Chenopodium quinoa</i> , <i>Cucumis sativus</i> and <i>Nicotiana tabacum</i> ).
<b>Viroids</b>	Growing season inspection in PEQ for disease symptom expression
<b>Phytoplasmas</b>	Nested PCR using the universal phytoplasma fU5/rU3 (Lorenz <i>et al.</i> 1995) and R16F2n/R16R2 primers (Gundersen <i>et al.</i> 1996) and Hot water treatment (Refer to “Approved Treatments for <i>Vitis</i> ”) [cuttings only] OR nested PCR using the universal phytoplasma fU5/rU3 (Lorenz <i>et al.</i> 1995) and R16F2n/R16R2 primers (Gundersen <i>et al.</i> 1996) (two sets) [tissue culture only].
<b>Disease of unknown aetiology</b>	
LN33 stem grooving	Woody indicator (LN33).

### Notes:

1. The unit for testing is an individual plantlet or cutting. Each single plantlet and cutting must be labelled individually and tested separately.
2. Herbaceous indicator hosts: at least two plants of each herbaceous indicator species must be used in each test. Tests are to be carried out using the new season’s growth in the spring. Plants shall be sampled from at least two positions on every stem including a young, fully expanded leaf at the top of each stem and an older leaf from a midway position. Herbaceous indicator plants must be grown under appropriate temperatures and must be shaded for 24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
3. Woody indicators: at least two plants of each woody indicator must be used in each test. All woody indicators are to be inoculated by double budding.
4. Enzyme linked immunosorbent assay (ELISA) and polymerase chain reaction (PCR) tests for viruses. Tests must be completed at the optimal time for detection. In general, plants shall be sampled from at least two positions including a young, fully expanded leaf at the top of the stem and an older leaf from a midway position.
5. All PCR and ELISA tests must be validated using positive controls prior to use in quarantine testing. Positive and negative controls (including a blank water control for PCR) must be used in all tests. Ideally positive internal controls and a negative plant control should also be used in PCR tests.
6. Inspect *Vitis* plants for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.
7. With prior notification, MAF will accept other internationally recognised testing methods.

### References

- Gundersen, D.E., Lee, I.M. 1996. Ultrasensitive detection of phytoplasmas by nested-PCR assays using two universal primer pairs. *Phytopathologia Mediterranea* 35: 144-151.
- Lorenz, K.H., Scheider, B., Ahrens, U., Seemuller, E. 1995. Detection of the Apple proliferation and Pear decline phytoplasmas by PCR Amplification of ribosomal and

nonribosomal DNA. *Phytopathology* 85: 771-776.  
Minsavage G.V., Thompson C.M., Hopkins D.L., Leite R.M.V.B.C., Stall R.E., 1994.  
Development of a PCR protocol for detection of *Xylella fastidiosa* in plant tissue.  
*Phytopathology* 84: 456-461.

## **Approved Treatments for *Vitis***

### **Hot Water Treatment**

The consignment must be treated using hot water treatment (dipping), for the eradication of phytoplasmas and fastidious vascular prokaryotic organisms, as follows:

1. Cuttings with good hydration and reserves are stored in a cool room (~ 4°C). Before treatment, the dormant material must be held at room temperature for one day (24 hours).
2. For the treatment, the dormant material must be dipped into the hot water at 50°C for 45 minutes or at 45°C for 3 hours (FAO/IBPGR Technical Guidelines for Safe Movement of Grapevine Germplasm, 1990, Martelli G.P and Walter B. Virus Certification of Grapevines. In - Plant Virus Disease Control, edited by A. Hadidi, RK Khetarpal and H Koganezawa. APS Press 1998). The water bath must have a moving system to homogenize the temperature and a precise control system to monitor the temperature at an accuracy of 0.1°C.
3. After the treatment the cuttings must stay for one day (24 hours) at room temperature. After this period they are transferred to a cool room.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Wollemia nobilis*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Wollemia nobilis* nursery stock approved for entry into New Zealand**

Plants *in-vitro*

**2. Pests of *Wollemia nobilis***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Wollemia nobilis* plants *in-vitro* from Australia**

The requirements of this schedule are in addition to the requirements specified in Section 2.2.2 “Entry Conditions for Tissue Culture”.

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Special tissue culture media requirements

The tissue culture media must not contain charcoal.

(iii) Phytosanitary requirements

The full botanical name of *Wollemia nobilis* must be identified upon the phytosanitary certificate.

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken:

The *Wollemia nobilis* plants *in-vitro* have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from mother stock inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from explant material which has been surface sterilised in a solution of 0.5% sodium hypochlorite and sterile water, or MAF approved alternative treatment.

AND

- prepared by asexual reproduction (clonal techniques) under sterile conditions.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iv) Additional declarations to the phytosanitary certificate

No additional declarations are required.

(v) *Post-entry quarantine*

Post-entry quarantine is not required provided that the above measures have been completed.

## **Pest List for *Wollemia nobilis***

### **REGULATED PESTS (actionable)**

#### **Fungus**

##### **Ascomycota**

##### **Dothideales**

##### **Botryosphaeriaceae**

*Botryosphaeria spp.*

-

##### **Oomycota**

##### **Pythiales**

##### **Pythiaceae**

*Phytophthora cinnamomi*

black rot

##### **Arbuscular mycorrhizae**

All regulated species

##### **Ectomycorrhizae**

All regulated species

For organisms intercepted that are not listed within this pest list refer to the Biosecurity Organisms Register for Imported Commodities to determine regulatory status:

<http://www.maf.govt.nz/biosecurity/pests-diseases/registers-lists/boric/>

If the organism is not identified or categorised within the register, please contact

[plantimports@maf.govt.nz](mailto:plantimports@maf.govt.nz)

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Yucca*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Entry Conditions:** Basic; with variations and additional conditions as specified below:

**A. For Cuttings (dormant):**

**PEQ:** Level 2

**Minimum Period:** 3 months

**Inspection Requirements:** A minimum of 600 plants are to be inspected during each inspection in post-entry quarantine

**B. For Plants in Tissue Culture:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Zantedeschia*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**1. Type of *Zantedeschia* nursery stock approved for entry into New Zealand**

Dormant bulbs

Plants in tissue culture

**2. Pests of *Zantedeschia***

Refer to the pest list.

**3. Entry conditions for:**

**3.1 *Zantedeschia* dormant bulbs from any country**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

(ii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Zantedeschia* dormant bulbs have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi OR treated for regulated nematodes and fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses.

AND

- held in a manner to ensure that infestation/reinfestation does not occur following certification.

(iii) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section [if applicable], and by providing the following additional declaration to the phytosanitary certificate:

"The *Zantedeschia* dormant bulbs in this consignment have been:

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated nematodes and fungi [if applicable].

AND

- sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria, phytoplasmas and viruses.”

(iv) Post-entry quarantine

**PEQ:** Level 1

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

### **3.2 *Zantedeschia* plants in tissue culture from any country**

(i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** no import permit is required.

(ii) Special tissue culture media requirements

The tissue culture media may contain charcoal.

(iii) Phytosanitary requirements

Before a phytosanitary certificate is issued, the exporting country NPPO must be satisfied that the following activities required by the New Zealand Ministry of Agriculture and Forestry (MAF) have been undertaken.

The *Zantedeschia* plants in tissue culture have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

AND

- derived from parent stock inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

(iv) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declaration to the phytosanitary certificate:

"The *Zantedeschia* plants in tissue culture have been derived from parent stock:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests

(iv) Post-entry quarantine

Post-entry quarantine is not required provided that the above measures have been completed overseas. Alternatively the inspection and testing may be completed in post-entry quarantine upon arrival in New Zealand according to the following conditions:

**Phytosanitary certificate:** a completed phytosanitary certificate, issued by the national plant protection organisation (NPPO) of the exporting country, is required.

**Import permit:** an import permit is required.

**PEQ:** Level 3

**Quarantine Period:** This is the time required to complete inspections and/or testing to detect regulated pests. Three months is an indicative minimum quarantine period. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

## Pest List for *Zantedeschia*

### REGULATED PESTS (actionable)

#### Nematode

##### Secernentea

##### Tylenchida

##### Meloidogynidae

*Meloidogyne arenaria*

peanut root knot nematode

#### Fungus

##### Basidiomycota: Basidiomycetes

##### Agaricales

##### Tricholomataceae

*Armillaria mellea* (anamorph *Rhizomorpha subcorticalis*)

armillaria root rot

#### Oomycota

##### Pythiales

##### Pythiaceae

*Phytophthora richardiae*

rhizome and root rot

*Pythium aphanidermatum*

cottony leak

#### Bacterium

*Xanthomonas campestris* pv. *zantedeschiae*

-

#### Virus

*Zantedeschia mild mosaic virus*

-

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as “see 155.02.06 under *Zingiber*”, and are additional to those specified in sections 1, 2 and 3 of the import health standard.

**GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** *Helicobasidium mompa*; Virus diseases

**Entry Conditions:** **Basic;** with variations and additional conditions as specified below:

**A. For Whole Plants:**

**PEQ:** Level 2

**Minimum Period:** 6 months

**B. For Dormant Bulbs:**

**PEQ:** Level 1

**Minimum Period:** 3 months

**Additional Declaration(s):**

"The dormant bulbs in this consignment have been:

- derived from a crop which was inspected during the growing season according to appropriate procedures and found to be free of regulated pests.

AND

- treated for regulated insects as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment.

AND

- sourced from a “Pest free area” or “Pest free place of production”, free from *Helicobasidium mompa* OR treated for regulated nematodes and fungi as described in section 2.2.1.7 of the basic conditions within 7 days prior to freezing, cold-storage or shipment."

**C. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.

**PLUS:**

**Additional Declaration:**

"The cultures have been derived from parent stock tested and found free of virus diseases."