

# MINISTRY FOR PRIMARY INDUSTRIES STANDARD 155.02.06

# **Importation of Nursery Stock**

Issued as an import health standard pursuant to section 24A of the Biosecurity Act 1993

Regulation & Assurance
Plants, Food & Environment Directorate
PO Box 2526
Wellington 6140, New Zealand
www.mpi.govt.nz

Growing and Protecting New Zealand

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# **ENDORSEMENT**

This Ministry for Primary Industries standard is hereby approved. Pursuant to section 24A of the Biosecurity Act 1993, I hereby issue this document as an import health standard.

Signature of Manager, Import & Export Plants
Acting pursuant to delegated Director-General authority

Date: 22 December 2016

# **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, Ministry for Primary Industries, 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 Pesticide treatments for dormant bulbs	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	Ficus schedule	6 September 2005
4	Acacia, Acer, Allium, Canna, Cotoneaster, Cycas, Hippeastrum, Hydrangea, Iris, and Lilium schedules	6 October 2005
5	Acacia, Acer, Begonia, Canna, Cotoneaster and Hydrangea schedules, section 2.2.1.7	8 February 2006
6	Acer, Aesculus, Arbutus, Acacia, Calladium, Camellia, Castanea, Gaultheria, Fagus, Kalmia, Photinia, Prunus, Vaccinum schedules, section 2.2.1.10, section 2.2.1.11	22 May 2006
7	Actinidia, Hippeastrum and Prunus schedules	9 August 2006
8	Allium, Fragaria, Hippeastrum, Miscanthus, Solanum tuberosum, and Zantedeschia schedules.	4 August 2008
9	Corylus and Wollemia nobilis schedules.	10 November 2008
10	Allium, Persea, Rubus, Vaccinium, and Vaccinium macrocarpon 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	Tulipa schedule	18 January 2010
14	Prunus, Solanum tuberosum, and Vaccinium macrocarpon schedules.	6 July 2010
15	Allium schedule	13 September 2010
16	Berberis, Carpinus, Cotoneaster, Eucalyptus, Nandina, Olea, Populus, Pseudotsuga, Ulmus schedules, section 2.2.1.10 and section 2.2.1.11	7 June 2011
17	Phalaenopsis schedule	8 August 2011
18	Removal of the schedules for <i>Acca sellowiana</i> and <i>Agonis</i> , <i>with</i> incorporation under the <i>Metrosideros</i> schedule. Amendment to the <i>Eucalyptus</i> and <i>Eugenia</i> schedules.	25 August 2011
19	Dracaena schedule	12 September 2011
20	Malus schedule	20 June 2012

21	Artocarpus schedule	29 June 2012
22	Cycas, Dracaena, Fuchsia schedules, section 2.2.1.10, 2.2.1.11, 2.2.3 and 2.3.3	16 August 2012
23	Solanum tuberosum schedule	8 April 2013
24	Eucalyptus, Eugenia, Metrosideros and Vitis schedules	22 May 2013
25	Actinidia schedule	6 September 2013
26	Section 2.2.2.2	27 January 2014
27	Vitis schedule	11 March 2014
28	Rubus schedule	21 March 2014
29	Section 2.3.2.1, section 2.2.1.11, schedules for Allium, Begonia, Canna, Citrus, Crocus, Dahlia, Fortunella, Fragaria, Gladiolus, Hippeastrum, Lilium, Malus, Miscanthus x giganteus, Narcissus, Olea, Persea, Poncirus, Prunus, Rubus, Solanum tuberosum, Tulipa, Vaccinium, Vaccinium macrocarpon and Vitis	11 June 2014
30	Schedules for Chrysanthemum, Diascia, Dahlia and Solanum	18 August 2014
31	Schedules for Citrus, Fortunella, Fragaria, Malus and Poncirus	27 November 2014
32	Schedules for Hippeastrum and Vitis	21 January 2015
33	New section for <i>Ceratocystis fimbriata</i> (section 2.2.1.8), renumbering of subsequent sections, new schedule for <i>Platanus</i> for <i>C. platani</i> , sections 2.2.1.6 and 2.2.1.7, schedules for <i>Acacia</i> , <i>Acrocomia</i> , <i>Carica</i> , <i>Carya</i> , <i>Carya ovata</i> , <i>Citrus</i> , <i>Delphinium</i> , <i>Eucalpytus</i> , <i>Fagus</i> , <i>Fagus sylvatica</i> , <i>Ficus</i> , <i>Fragaria</i> , <i>Juglans</i> , <i>Malus</i> , <i>Mangifera</i> , <i>Metrosideros</i> , <i>Populus</i> , <i>Prunus</i> , <i>Quercus</i> , <i>Rubus</i> , <i>Tulipa</i> , <i>Ulmus</i> , <i>Vaccinium</i> and <i>Vitis</i>	10 December 2015
34	Removal of TEM as a phytosanitary measure for the Olea, Prunus, Vaccinium and Solanum tuberosum schedules; removal of Peach violet mosaic virus from the pest list of Prunus; update of Fragaria, Malus, Prunus, Rubus and Vitis schedules for the sodium hypochlorite treatment, and addition of APMMV to the pest list in the Solanum tuberosum schedule.	11 March 2016
35	Addition of <i>Veronica spicata</i> as a host for <i>Phytophthora</i> ramorum and update the host list and geographic distribution of <i>Xylella fastidiosa</i>	06 May 2016
36	New section for <i>Phellinus noxius</i> (section 2.2.1.13), renumbering of subsequent sections; schedules for <i>Acacia</i> , <i>Acrocomia</i> , <i>Aesculus</i> , <i>Araucaria</i> (new), <i>Arbutus</i> , <i>Artocarpus</i> , <i>Camellia</i> , <i>Camellia sinensis</i> , <i>Cedrus</i> , <i>Citrus</i> , <i>Crataegus</i> , <i>Cycas</i> , <i>Delphinium</i> , <i>Diospyros</i> , <i>Eriobotrya</i> , <i>Eucalyptus</i> , <i>Eugenia</i> , <i>Ficus</i> , <i>Fortunella</i> , <i>Hebe</i> , <i>Hydrangea</i> , <i>Litchi</i> , <i>Mangifera</i> , <i>Metrosideros</i> , <i>Nandina</i> , <i>Persea</i> , <i>Planera</i> , <i>Poncirus</i> , <i>Populus</i> , <i>Prunus</i> , <i>Rhododendron</i> , <i>Rosa</i> , <i>Salix</i> , <i>Ulmus</i> , and <i>Vitis</i>	21 November 2016

37	Measures for <i>Xylella fastidiosa</i> (Xf) to include an update of:	21 December 2016
37	a) the plant host list for this pathogen, in the following	21 December 2010
	schedules: Asparagus, Fagus sylvatica, Helianthus, Humulus,	
	Photinia, Ranunculus, Acacia, Acer, Acrocomia, Aesculus,	
	Arbutus, Bidens, Canna, Carya, Carya ovata, Castanea, Citrus,	
	Cotoneaster, Delphinium, Diospyros, Eucalyptus, Eugenia,	
	Eupatorium, Fagus, Ficus, Fuchsia, Fortunella, Fragaria,	
	Hebe, Hydrangea, Ipomoea batatas, Juglans, Juniperus,	
	Metrosideros, Nandina, Olea, Persea, Phoenix, Platanus,	
	Poncirus, Populus, Prunus, Pseudotsuga, Pyrus, Quercus, Rosa,	
	Rubus, Salix, Solidago, Ulmus, Vaccinium, Verbena and Vitis;	
	b) the list of countries not recognised by MPI as free from Xf;	
	c) the section 1.4 Definitions and Abbreviations;	
	d) the requirements for minimum PEQ period to 6 months;	
	e) Canna and Ranunculus schedule for dormant bulbs to	
	specify that bulbs from countries not recognised as free from Xf	
	must be imported into Level 2 PEQ; f) entry conditions for	
	dormant bulbs for <i>Verbena</i> (it has been removed);	
	g) the non-GMO declaration, to remove all references to the	
	IHS: Seeds for sowing; h) the additional declarations for Xf; and	
	the addition of a guidance statement stating for which nursery	
	stock material the measures are applied.	
38	Addition of phytosanitary measures to <i>Rosa</i> schedule for	22 December 2016
	'Candidatus Phytoplasma asteris', 'Candidatus Phytoplasma	
	aurantifolia', 'Candidatus Phytoplasma mali', 'Candidatus	
	Phytoplasma prunorum' and 'Candidatus Phytoplasma rubi'.	
	Addition of phytosanitary measures to <i>Rosa</i> schedule for viruses	
	Blackberry chlorotic ringspot virus, Raspberry ringspot virus	
	(strains not in New Zealand) and Rose rosette virus.	

# 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 for Primary Industries. All communication pertaining to this import health standard should be addressed to:

Ministry for Primary Industries PO Box 2526 25 The Terrace Wellington NEW ZEALAND

Telephone: +64 4 894 5514 Fax: +64 4 894 0662

E-mail: <u>plantimports@mpi.govt.nz</u>
Website: <u>http://www.mpi.govt.nz</u>

#### 1.2 SCOPE

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

#### 1.3 REFERENCES

#### **New Zealand legislation**

- Biosecurity Act 1993
- Hazardous Substances and New Organisms Act 1996 (HSNO Act 1996)

# Standards issued under the Biosecurity Act

The following standards can be accessed on the website: <a href="http://www.mpi.govt.nz/importing/plants/nursery-stock/requirements">http://www.mpi.govt.nz/importing/plants/nursery-stock/requirements</a>

- Facility Standard: Post Entry Qurantine for Plants (MPI.STD.PEQ)
  - However, section 1.4 "Implementation arrangements' of MPI.STD.PEQ identifies when material may be imported into and/or held in a transitional facility approved to the previous standard PBC-NZ-TRA-PQCON: Specification for the Registration of a Plant Quarantine or Containment Facility and Operators
- Operational Standard PIT-OS-TRA-ACPQF: Accreditation of Offshore Plant Quarantine Facilities and Operators
- Diagnostic Facility Standard 155.04.03: A standard for diagnostic facilities which undertake the identification of new organisms, excluding animal pathogens

# **International Standard for Phytosanitary Measures (ISPM)**

- ISPM 04. Requirements for the establishment of pest free areas
- ISPM 05. Glossary of phytosanitary terms
- ISPM 10. Requirements for the establishment of pest free places of production and pest free production sites
- ISPM 12. Phytosanitary certificates
- ISPM 20. Guidelines for a phytosanitary import regulatory system
- ISPM 24. Guidelines for the determination and recognition of equivalence of phytosanitary measures
- ISPM 27. Diagnostic protocols for regulated pests

#### 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.

**Consignment:** A quantity of plants, plant products or other articles being moved from one country to another and covered, when required, by a single phytosanitary certificate (a consignment may be composed of one of more commodities or lots) [FAO, 1990; revised ICPM, 2001]

**Country of origin (of a consignment of plants):** Country where the plants were grown [FAO, 1990; revised CEPM, 1996; CEPM, 1999]

**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 Protection Authority (EPA): Authority responsible for administering the Hazardous Substances and New Organisms Act 1996.

Free from (of a consignment, field or place of production): Without pests (or a specific pest) in numbers or quantities that can be detected by the application of phytosanitary procedures [FAO, 1990; revised FAO, 1995; CEPM, 1999]

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

- a. has been modified by *in-vitro* techniques; or
- b. 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 the Ministry for Primary Industries).

**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 MPI (see 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].

**MPI**: The Ministry for Primary Industries, formerly the Ministry of Agriculture and Forestry (MAF).

**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:** Living plants and parts thereof, including seeds and germplasm [FAO, 1990; revised IPPC, 1997]

**Plants Biosecurity Index (PBI):** A database of plant species that have been approved by EPA and may be imported provided they meet certain conditions. The PBI can be found at the following web address: MPI Plant Biosecurity Index

**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 MPI'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 Protection Authority (EPA) at the following address:

Environmental Protection Authority PO Box 131 Wellington 6140 NEW ZEALAND

Phone: +64 4 916 2426
Fax: +64 4 914 0433
E-mail: <u>info@epa.govt.nz</u>
Website: <u>http://www.epa.govt.nz</u>

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 EPA. If EPA approves an application, MPI 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 MPI at the address given below.

The Ministry for Primary Industries can also be contacted for information on permit application procedures and import health standards. Address for the Plant Imports Team:

Plant Imports Ministry for Primary Industries P.O. Box 2526 Wellington 6140 NEW ZEALAND

Telephone: +64 4 894 0862 Fax: +64 4 894 0662

E-mail: <u>plantimports@mpi.govt.nz</u>
Website: <u>http://www.biosecurity.govt.nz</u>

# 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 is a specific species requires a CITES import permit, please contact the Department of Conservation (<a href="http://www.doc.govt.nz">http://www.doc.govt.nz</a>).

# 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 MPI 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 MPI'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 MPI'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 MPI (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  $(g/m^3)$  and temperature  $(^{\circ}C)$ :

Rate (g/m³)	Temperature (°C)
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°C for at least 2 hours, followed by immersion in hot water at a constant temperature of at least 45°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.

Chemical group	Active ingredient	Dip time	Notes
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 (0.8 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 (g/m³) and temperature (°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  $(g/m^3)$  and temperature  $(^{\circ}C)$ :

Rate (g/m <sup>3</sup> )	Temperature (°C)
48	10 – 15
40	16 – 20
32	21 – 27
28	28 – 32

#### OR

(2) Actellic room fumigation: 10 cc Actellic/10m3 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/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 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.

Chemical group	Active ingredient	Time	Notes
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 (g/m³) and temperature (°C) prescribed for insects above.

#### OR

(2) Actellic room fumigation: 10 cc Actellic/10m3 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.

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

## **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/m³) 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.

Active ingredient	Dip time	Notes
Bromo-chloro-dimethylhydantoin (8.1-16 g per litre	5 mins	
of dip)		
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.

Chemical group	Active ingredient	Dip time	Notes
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-	Thiram (11.2 g per litre of dip)	_	Dip at room temperature
carbamate			
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 *Ceratocystis fimbriata sensu lato* complex (strains not in New Zealand)

Note: The only known strain of *C. fimbriata* present in New Zealand is the *Ipomoea* strain, which is restricted to members of the *Ipomoea* genus.

All species of nursery stock (cuttings, whole plants, dormant bulbs and tubers) of the following genera must meet the requirements for Ceratocystis fimbriata sensu lato complex (strains not in New Zealand) identified in this section:

- Acacia
- Actinidia
- Alocasia
- Ananas
- Annona
- Betula
- Carya
- Cassia
- Cassia
- Celtis
- Citrus
- ColocasiaCorymbia
- Eriobotrya

- Erythrina
- Eucalyptus
- Fagus
- Ficus carica
- Inga
- Juglans
- Mangifera
- Metrosideros
- Metroxylon
- Ostrya
- Passiflora
- Pimenta
- Populus

- Protea
- Prunus
- Punica
- Quercus
- Shizolobium
- Schotia
- Spathodea
- Styrax
- Syngonium
- Tilia
- Ulmus
- Xanthosoma

# i) For countries recognized by MPI as free from *Ceratocystis fimbriata sensu lato* complex (strains not in New Zealand)

The following Additional Declaration shall be endorsed on the phytosanitary certificate: "The plants have been sourced from a country free from *Ceratocystis fimbriata sensu lato* complex (strains not in New Zealand)"

Note: Countries where *Ceratocystis fimbriata sensu lato* complex is known to be present:
Australia, Brazil, Canada, China, Colombia, Congo, Costa Rica, Côte d'Ivoire, Cuba, Ecuador, Fiji, Guatemala, India, Indonesia, Jamaica, Japan, Kenya, Malawi, Malaysia, Mexico, Myanmar, Oman, Pakistan, Papua New Guinea, Poland, South Africa, Suriname, Taiwan, Tanzania, Thailand, Uganda, United States, Uruguay, Venezuela, Vietnam, Western Samoa, Zambia.

#### ii) For all other countries

The phytosanitary certificate must have the following additional declaration: "The plants have been sourced from a state/province free from *Ceratocystis fimbriata sensu lato* complex (strains not in New Zealand) or from a Pest Free Place of Production free from *Ceratocystis fimbriata sensu lato* complex (strains not in New Zealand)"

#### AND

The plants must be tested for *Ceratocystis fimbriata sensu lato* complex (strains not in New Zealand) during the post entry quarantine period, at an MPI approved diagnostic facility.

#### iii) For nursery stock sourced from MPI approved offshore facilities

Specific measures are detailed in the agreement between MPI and the approved facility, or the plants must be tested for the *C. fimbriata sensu lato* complex (strains not in New

Zealand) during the post entry quarantine period, at an MPI approved diagnostic facility.

# 2.2.1.9 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	<b>United Arab Emirates</b>
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	Kazakstan	Russia	Turkmenistan
China	Kyrgyzstan	South Africa	Uganda
Georgia	Malawi	South Korea	Uzbekistan
India	Malaysia	Taiwan	
Indonesia	Mongolia	Tajkistan	
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	5 mins	
litre of dip/spray)		
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-	Thiram (11.2 g per litre of dip)	-	Dip at room	
carbamate			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.

#### 2.2.1.10 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".

#### 2.2.1.11 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 hosts 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

• Fuchsia

• Gaultheria

• Kalmia

• Lithocarpus

• Olea

• Photinia

• Populus

Prunus

Pseudotsuga

**Ouercus** 

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

• 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 MPI 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 MPI as free of *Phytophthora ramorum*: Australia, Israel, Japan, and South Africa.

# ii) For countries with MPI approved programs (see below)

The following Additional Declaration shall be endorsed on the phytosanitary certificate: "The plants have been sourced from a NZ MPI approved Pest Free Place of Production for *Phytophthora ramorum*"

Note: No countries presently have MPI 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 MPI for evaluation. Prior to accepting a program MPI 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 MPI approved offshore facilities

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

#### 2.2.1.12 Measures for Xylella fastidiosa

The following measures only apply to nursery stock (whole plants, cuttings and dormant bulbs) identified within the schedule of special conditions as hosts of Xylella fastidiosa.

• There is a CTO direction (CTOPlants: 2016004) in place for all nursery stock from Costa Rica.

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

All phytosanitary certificates must be endorsed with the following additional declaration:

"The plants in this consignment have only been grown in, and exported from, the country of origin [insert country name], which is free from Xylella fastidiosa"

#### ii) For all other countries

'1. Additional declaration' AND '2. Pre-determined testing in post entry quarantine' must be met for nursery stock imported under this option.

#### 1. Additional declaration:

All phytosanitary certificates must be endorsed with the following additional declaration:

"The plants in this consignment have only been grown in, and exported from, a "Pest free area" [insert area name] or "Pest free place of production" [insert place name], which is free from Xylella fastidiosa".

#### 2. Pre-determined testing in post entry quarantine:

**PEQ:** Level 2 (unless a higher level of PEQ is required in the schedule of special conditions)

# **Minimum period:** 6 months

The plants must be tested for *Xylella fastidiosa* during the PEQ period, at an MPI approved diagnostic facility, as described below:

- The minimum PEQ period will be 6 months, as this is the time required to complete growing inspections and testing for *Xylella fastidiosa*. For example:
  - For schedules which identify a minimum period of 3 months, the minimum PEQ period will be extended to 6 months
  - For schedules with a minimum period longer than 6 months, the longer period will apply.
- Samples must be collected and tested at the end of the summer (or 'summer-like') period;
  - The unit for testing is defined in section 2.3.2.1 "Pre-determined testing"
  - Plants shall be sampled from at least four positions; including a minimum of two young, fully expanded leaves at the top of the stem and two older leaves from a midway position
  - The samples must be tested by PCR for Xylella fastidiosa
  - All samples must test negative

#### iii) For nursery stock sourced from MPI approved offshore facilities

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

#### Guidance:

The following countries are not recognised by MPI as free from *Xylella fastidiosa*:

- All countries in Europe, the America's and the Caribbean
- Asia: India, Taiwan
- Near East: Iran

The full list of countries which are not recognised by MPI as free from *Xylella fastidiosa* can be viewed on the website: Xylella fastidiosa

#### 2.2.1.13 Measures for *Phellinus noxius*

The following measures only apply to whole plants including rooted cuttings (not dormant bulbs or unrooted cuttings), identified within the schedule of special conditions as hosts of Phellinus noxius

# i) For countries recognised by MPI as free from *Phellinus noxius*

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

"The plants have been sourced from a country free from *Phellinus noxius*"

# ii) For all other countries

One of the following additional declarations must be endorsed on the phytosanitary certificate:

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

## OR, for areas approved by MPI

b) "The plants have been sourced from a "Pest free area", [insert area name], free from Phellinus noxius".

#### **Guidance:**

Countries where *Phellinus noxius* is known to be present:

- <u>Africa:</u> Angola, Benin, Burkina, Cameroon, Central African Republic, Cote d'Ivoire Democratic Republic of Congo, Faso, Gabon, Ghana, Kenya, Liberia, Nigeria, Sierra Leone, Tanzania, Togo, Uganda
- <u>Asia:</u> Andaman Islands, China, Islands of China, East Indies, India, Indonesia, Islands of Japan, Malay Peninsula, Malaysia, Myanmar, Nicobar Islands, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Vietnam
- Central America & Caribbean: Brazil, Costa Rica, Cuba
- <u>Oceania:</u> American Samoa, Australia (NSW, Queensland), Fiji, Mariana Islands, New Guinea, Papua New Guinea, Samoa, Vanuatu

# 2.2.1.14 Post-Entry Quarantine

Following arrival in New Zealand all nursery stock, unless specified in the schedules of special entry conditions, must undergo a period of post entry quarantine (PEQ) in order to check for the presence of regulated pests and/or diseases.

PEQ will be carried out in a transitional facility registered in accordance with the Facility Standard: Post Entry Quarantine for Plants (MPI.STD.PEQ). The nursery stock must be actively growing throughout the quarantine period. The quarantine period:

- Will be a minimum of 3 months for species with a nursery stock import specification of 'L2 (Basic)' as indicated in the Plants Biosecurity Index (PBI); or
- Will be the minimum period stated in the schedule of special entry conditions

The quarantine period may be extended if material is slow growing, pests and diseases are detected, testing or treatments required.

The MPI Inspector has full authority to determine when the plant material may receive biosecurity clearance.

A list of MPI-accredited post entry quarantine facilities is available on MPI's website: <a href="http://www.mpi.govt.nz/news-and-resouces/resources/registers-and-lists/post-entry/">http://www.mpi.govt.nz/news-and-resouces/resources/registers-and-lists/post-entry/</a>

# 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 vessel (rigid container, bag or pottle) must be pest proof and transparent. The tissue culture medium 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

The schedule of special conditions must list pollen as an approved commodity type for importation to occur under this section

An import permit must be obtained from MPI prior to import. Prior to issuing the permit to import, MPI 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, MPI reserves the right to validate all measures that are undertaken overseas. This includes measures undertaken by national plant protection organisations, MPI-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 labelling 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 MPI.

All testing and treatment in New Zealand must be completed in MPI-accredited facilities, accredited to Diagnostic Facility Standard 155.04.03: A standard for diagnostic facilities which undertake the identification of new organisms, excluding animal pathogens and BMG-STD-TREAT: Approval of Suppliers Providing Treatment of Imported Risk Goods and Forestry/Plant Related Material for Export, respectively.

#### 2.3.2.1 Pre-determined testing

The schedule of special entry conditions identifies when pre-determined testing is required for plant material being held in post entry quarantine. For material which requires pre-determined testing, the unit for testing is defined as follows:

The unit for testing is an individual imported plantlet (imported *in vitro*) or cutting. Each plantlet or cutting must be labelled individually and tested separately, with the following exceptions:

## **Polymerase chain reaction (PCR)**

Samples taken from up to five plants being grown in post entry quarantine can be combined to form a single composite sample for pre-determined testing by PCR, provided that the plants are derived from:

- (i) A single imported plantlet or cutting; or
- (ii) Multiple plantlets or cuttings derived from the same offshore mother plant; or
- (iii) Different mother plants of the same species.

#### Enzyme-linked immunosorbent assay (ELISA)

Samples taken from up to five plants being grown in post entry quarantine can be combined to form a single composite sample for pre-determined testing by ELISA, provided that the plants are derived from:

- (i) A single imported plantlet or cutting; or
- (ii) Multiple plantlets or cuttings derived from the same mother plant, where the phytosanitary certificate is endorsed with an additional declaration certifying that the plantlets/cuttings have been derived from the same mother plant.

## Graft (woody) indexing

Where prior permission is received from MPI, samples taken from up to five plants being grown in post entry quarantine can be combined to form a single composite sample for predetermined testing by graft indexing, provided that the plants are derived from:

- (i) A single imported plantlet or cutting; or
- (ii) Multiple plantlets or cuttings derived from the same mother plant, where the phytosanitary certificate is endorsed with an additional declaration certifying that the plantlets/cuttings have been derived from the same mother plant.

#### 2.3.3 BIOSECURITY CLEARANCE

A biosecurity clearance, under section 26 of the Biosecurity Act, may be given when the nursery stock meets the requirements of this standard. There are other restrictions in section 27 and 28 of the Biosecurity Act on the giving of biosecurity clearances i.e. compliance with an import health standard or import permit does not guarantee biosecurity clearance will be given. As per Section 27 of the Biosecurity Act, biosecurity clearance will not be given if an inspector considers that the nursery stock is infected, or is showing signs of being infected, with organisms that may be unwanted organisms, or the inspector considers there has been a change in circumstances, or in the state of knowledge, that makes it unwise to give biosecurity clearance.

For nursery stock imported under an import permit, should there be a change in circumstances or the state of knowledge, the import permit will be amended to identify the requirements that must be met before the consignment will be eligible for biosecurity clearance. This may include, but is not limited to, a change in the pest host status of the nursery stock, a change in the distribution or virulence of a pest, or the availability of a new or improved test method.

# 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 reexport; 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 MPI-accredited (registered) facilities overseas under predetermined conditions, with a reduced PEQ requirement following arrival in New Zealand. Overseas facilities must be accredited by MPI according to the Standard PIT-OS-TRA-ACPQF: Accreditation of Offshore Plant Quarantine Facilities and Operators. A list of MPI-accredited offshore facilities is available on MPI's website: <a href="http://mpi.govt.nz/news-and-resources/resources/registers-and-lists/offshore/">http://mpi.govt.nz/news-and-resources/resources/registers-and-lists/offshore/</a>

#### 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 <u>Plants Biosecurity Index</u> will be continuously updated on MPI's website:

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 2.2.1.11)

# **B. For Tissue Cultures:**

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MPI-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 *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:** Ceratocystis fimbriata; Phellinus noxius; Phytophthora ramorum; 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 *Ceratocystis fimbriata* (section 2.2.1.8) **Note**: Only applies to members of the *Acacia* and *Passiflora* genera
- b. Conditions for *Phytophthora ramorum* (section 2.2.1.11) **Note:** Only applies to the following species: *Veronica spicata*
- Conditions for *Xylella fastidiosa* (section 2.2.1.12)
  Guidance for importers: The minimum quarantine period will be 6 months for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*
- d. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note:** Only applies to the following species: *Artemisia capillaris; Artemisia princeps; Duranta repens; Nerium oleander;* and applies to all members of the *Acacia* genus

# **B. For Cuttings PEO:** Level 2

Minimum Period: 3 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note**: Only applies to members of the *Acacia* and *Passiflora* genera
- b. Conditions for *Phytophthora ramorum* (section 2.2.1.11) **Note:** Only applies to the following species: *Veronica spicata*
- Conditions for *Xylella fastidiosa* (section 2.2.1.12)
   Guidance for importers: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*

# C. 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 *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 2.2.1.11), and
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12), and **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*
- 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

**PEO:** Level 3

**Minimum Period:** 6 months

a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

#### **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 *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: Ceratocystis fimbriata, Lethal yellowing; cadang-cadang, Phellinus

noxius; Xylella fastidiosa

**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

a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note**: Only applies to members of the *Metroxylon* genus

b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

**Note:** Only applies to members of the *Phoenix* genus

**Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa* 

c. Conditions for *Phellinus noxius* (section 2.2.1.13)

**Note:** Only applies to the following species: *Areca catechu; Areca triandra; Chrysalidocarpus lutescens; Coco nucifera; Elaeis guineensis; Roystonea regia* 

d. Additional Declaration:

"Cadang cadang and lethal yellowing 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 *Actinidia*".

The schedule of special entry conditions for *Actinidia* nursery stock has been suspended dated 6 September 2013. This means that *Actinidia* nursery stock is not eligible for import into New Zealand, including into post entry quarantine.

The MPI Chief Technical Officer believes, on reasonable grounds, that knowledge has changed in such a way that the requirements in the import health standard 155.02.06: Importation of Nursery Stock, regarding *Actinidia* spp. nursery stock, no longer enable the purposes of the Biosecurity Act 1993 (Part 3) to be achieved.

MPI is undertaking an Import Risk Analysis and review of the import requirements for *Actinidia* nursery stock. The schedule of special entry conditions for *Actinidia* nursery stock will be reinstated at such time as the MPI Chief Technical Officer believes on reasonable grounds that the reviewed import health standard will enable the purposes the Biosecurity Act 1993 (Part 3) to be achieved.

Questions related to this suspended schedule should be directed to:

Plant Imports Team
Ministry for Primary Industries
PO Box 2526
Wellington
NEW ZEALAND
plantimports@mpi.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 *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	<b>Plants:</b>
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**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.

**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: Phellinus noxius; Phytophthora ramorum; 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 *Phytophthora ramorum* (section 2.2.1.11)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- c. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note:** Only applies to the following species: *Fraxinus griffithii; Rhus succedanea*

## **B. For Cuttings PEO:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

### C. Plants in Tissue Culture from All Countries:

**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 for Primary Industries (MPI) 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 and Tobacco rattle 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 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 and Tobacco rattle 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 MPI.

## 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 for Primary Industries (MPI) 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 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 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 and Tobacco rattle virus)."

#### (v) <u>Post-entry quarantine</u>

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 MPI.

## Pest List for Allium

## **REGULATED PESTS (actionable)**

Insect

Insecta

Coleoptera

Curculionidae

Brachycerus muricatusweevilBrachycerus undatusweevilCeutorhynchus jakovlevionion weevil

Nitidulidae

Carpophilus obsoletus dried fruit beetle

**Diptera** 

Anthomyiidae

Delia antiquaonion maggotDelia florilegaonion fly

Heleomyzidae

Suillia lurida garlic fly

Suillia univittata -

Syrphidae

Eumerus amoenus onion bulb fly

Lepidoptera Cossidae

Dyspessa ulula garlic moth

Yponomeutidae

Acrolepia alliella -

Acrolepia sapporensis allium leafminer Acrolepiopsis assectella leek moth

Thysanoptera Thripidae

Thrips tabaci [vector] onion thrips

Mite Arachnida

> Acarina Acaridae

> > Rhizoglyphus setosus bulb mite

Eriophyidae

Aceria tulipae [vector] wheat curl mite

Nematode

Adenophorea Dorylaimida

Longidoridae

Paralongidorus maximus -

Trichodoridae

Paratrichodorus alliusstubby root nematodeParatrichodorus minor [vector]stubby root nematodeParatrichodorus teresstubby root nematode

Secernentea Tylenchida

Aphelenchoididae

Aphelenchoides besseyi rice white-tip nematode

Aphelenchoides parietinus -

Belonolaimidae

Belonolaimus gracilis sting nematode

Hoplolaimidae

Helicotylenchus indicussprial nematodeHelicotylenchus microlobusspiral nematodeHelicotylenchus multicinctusspiral nematode

Hoplolaimus seinhorstilance nematodeRotylenchulus reniformisreniform nematode

Meloidogynidae

Meloidogyne arenaria peanut root knot nematode

Meloidogyne chitwoodi root knot nematode

Tylenchidae

Ditylenchus dipsaci [strains not in New Zealand] stem and bulb nematode

Fungus Ascomycota

> Dothideales Mycosphaerellaceae

Mycosphaerella allii-cepae (anamorph Cladosporium leaf blotch

allii-cepae)

**Basidiomycota: Basidiomycetes** 

Agaricales

Tricholomataceae

Armillaria mellea (anamorph Rhizomorpha armillaria root rot

subcorticalis)

**Basidiomycota: Teliomycetes** 

**Uredinales** 

Melampsoraceae

Melampsora allii-fragilis rust

**Pucciniaceae** 

Puccinia asparagi asparagus rust

**Basidiomycota: Ustomycetes** 

Ustilaginales Tilletiaceae

Urocystis colchici leaf smut

Oomycota Pythiales Pythiaceae

Phytophthora palmivora black rot

mitosporic fungi (Coelomycetes)

Sphaeropsidales Sphaerioidaceae

Phyllosticta allii leaf blight

Septoria viridi-tingens ---

**Bacterium** 

Enterobacteriaceae

Erwinia chrysanthemi pv. chrysanthemi bacterial soft rot

Pseudomonadaceae

Burkholderia cepacia sour skin

Pseudomonas xanthochlora

Virus

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 [strains not in New Zealand]

**Phytoplasma** 

Aster yellows phytoplasma Garlic decline phytoplasma Onion yellows phytoplasma -

Ministry for Primary Industries Import Health Standard 155.02.06: Importation of Nursery Stock **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:

**PEO:** 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 MPI-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 MPI-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:**

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: PEO:** Level 1

**Minimum Period:** 3 months

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

#### 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:**

**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:

**PEO:** 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

MPI 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:

**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 *Araucaria*", and are additional to those specified in sections 1, 2 and 3 of the import health standard.

## **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Phellinus noxius

**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 *Phellinuis noxius* (section 2.2.1.13)

**B. For Cuttings: PEQ:** Level 2

**Minimum Period:** 3 months

C. For Plants in Tissue Culture from All Countries:

**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:** Phellinus noxius; Phytophthora ramorum; 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 *Phytophthora ramorum* (section 2.2.1.11)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note:** Only applies to the members of the *Laurus* and *Magnolia* genera **Guidance for importers**: The minimum quarantine period will be 6 months for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*
- c. Conditions for *Phellinus noxius* (section 2.2.1.13)
   Note: Applies to the following species: *Michelia compressa*; *Michelia figo*; *Osmanthus fragans*; and applies to all members of the *Cinnamomum* genus

## **B.** For Cuttings:

**PEQ:** Level 2

Minimum Period: 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
   Note: Only applies to the members of the *Laurus* and *Magnolia* genera
   Guidance for importers: The minimum quarantine period will be 6 months for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*

#### C. For Plants in Tissue Culture from All Countries:

**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	nosporangium 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:** These 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 *Artocarpus*", and are additional to those specified in sections 1, 2 and 3 of the import health standard.

## **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests**: Phellinus noxius

Type of *Artocarpus* nursery stock approved for entry into New Zealand Tissue culture

**Entry conditions**: 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 *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 <u>other than</u> 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 *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; Xylella fastidiosa

**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 *Xylella fastidiosa* (section 2.2.1.12)

Guidance for importers: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced

from countries not recognised by MPI as free from Xylella fastidiosa

**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:** 

**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 MPI-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 bulb certification scheme."

OR

2) For bulbs NOT produced under a MPI-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: PEO:** Level 1

**Minimum Period:** 3 months

C. For Dormant Bulbs from Countries <u>other than</u> 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 *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 2.2.1.11)

#### **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".

**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 2.2.1.12)
   Guidance for importers: The minimum quarantine period will be 6 months for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*
- 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:

**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: 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

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

**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 <u>other than</u> 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."

**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:

**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**: Phellinus noxius; Phytophthora ramorum; Tetranychus kanzawai

#### **Entry Conditions:**

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

#### A. For Whole Plants

**PEQ:** Level 2

**Minimum Period:** 3 months

Note: All visible flower buds are to be removed prior to export.

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note:** Only applies to the following species: *Camellia japonica*
- c. Additional declaration:

"The plants have been dipped in prochloraz at the rate of 0.5g a.i. per litre of water".

## **B.** For Cuttings

**PEQ:** Level 2

**Minimum Period:** 3 months

Note: All visible flower buds are to be removed prior to export.

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- b. Additional declaration:

"The plants have been dipped in prochloraz at the rate of 0.5g a.i. per litre of water".

#### C. For Tissue Cultures:

#### 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:**

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

Georgia Laos Singapore Vietnam
India Lebanon South Korea Yemen

Indonesia Malaysia Sri Lanka

Quarantine Pests: Exobasidium vexans; Phellinus noxius; Phloem necrosis; Phytophthora

ramorum; Tetranychus kanzawai.

**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 2.2.1.11)

b. Conditions for *Phellinus noxius* (section 2.2.1.13)

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

**PEQ**: Level 3

**Minimum Period**: 3 months

a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)

Ministry for Primary Industries Import Health Standard 155.02.06: Importation of Nursery Stock **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 2.2.1.12)

#### B. For Dormant Bulbs from Australia, Israel and South Africa:

#### **OPTION 1:**

No import permit is required.

PEQ: None

- a. Conditions for *Xylella fastidiosa* (see section 2.2.1.12) **Note:** Only nursery stock sourced from a country recognised by MPI as free from *Xylella fastidiosa* can be imported under this option.
- 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** 

a. Conditions for *Xylella fastidiosa* (see section 2.2.1.12) For countries recognised as free from Xylella fastidiosa only)

**Note:** Only nursery stock sourced from a country recognised by MPI as free from *Xylella fastidiosa* can be imported under this option.

#### 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 2.2.1.12)

  Note: Only nursery stock sourced from a country recognised by MPI as free from *Xylella fastidiosa* can be imported under this option.
- b. Treatment; 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
- c. 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."

## **OPTION 2: PEQ:** Level 2

**Minimum Period:** 3 months

a. Conditions for *Xylella fastidiosa* (see section 2.2.1.12) **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa* 

#### **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:

**PEO**: Level 2

Minimum Period: 3 months

#### **Additional Declaration:**

"Papaya m	osaic virus and	Papaya	ringspot	virus	are not	known to
occur in			_		"	
occur in	(the country or st	ate 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 mosaic virus* and *Papaya ringspot virus*."

#### **OPTION 2:**

For Whole Plants and 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 *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 2.2.1.11)

#### **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 **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: Ceratocystis fimbriata, Fusicladium effusum, Pecan bunch, Xylella

fastidiosa

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

**PEQ**: Level 2

Minimum Period: 6 months

a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note**: Only applies to members of the *Carya* genus

b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note**: Only applies to members of the *Carya* genus

c. Additional declaration: "Fusicladium effusum and Pecan bunch 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 *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:** Ceratocystis fimbriata; Cryphonectria parasitica; Xylella fastidiosa

**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

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Carya and Ostrya genera*
- b. Additional declaration:

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

Conditions for *Xylella fastidiosa* (section 2.2.1.12)
 Note: Only applies to the members of the *Liriodendron* genus
 Guidance for importers: The minimum quarantine period will be 6 months for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*

#### **OPTION 2:**

**PEQ:** Level 3

**Minimum Period:** 6 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Carya and Ostrya genera*
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note:** Only applies to the members of the *Liriodendron* genus

#### **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 MPI-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 *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 carinife; 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: **PEO**: Level 3

**Minimum Period**: 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*
- 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."

**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.; Phellinus noxius;

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 *Phellinus noxius* (section 2.2.1.13)

Note: Only applies to the following species: Chamaecyparis formosensis; Cupressus lusitanica

# **B.** For Tissue Cultures:

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MPI-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 *Chrysanthemum*", 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**: Potato spindle tuber viroid<sup>1</sup>, Uredinales

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

	001101101101	20020,		 ons as specimes con
A. For	r Whole Plants	S		
PEQ:	Level 2			

**Minimum Period**: 3 months **Additional Declaration**:

"The nursery stock in this consignment has been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*.

AND

Rust diseases of genus *Coleosporium* and *Cronatium* are not known to occur on the host.

reade discuses of Serias	Corcospe	or turn and	Croncuttini	are not k	110 1111	io occui	OH(u	ie nost
species being imported)	in	(the country in	which the plants	c wara grown)		"		
species being imported)		(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.

#### **PLUS**

**Additional Declaration:** "The cultures have been derived from parent stock sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

OR

"The cultures have been derived from parent stock tested by PCR and found free from *Potato* spindle tuber viroid".

-

<sup>&</sup>lt;sup>1</sup> Requirements for *Potato spindle tuber viroid* will commence on 1 September 2014: All phytosanitary certificates issued on or after 1 September 2014 must be endorsed with the correct additional declarations for *Potato spindle tuber viroid*.

# 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."

Ministry for Primary Industries Import Health Standard 155.02.06: Importation of Nursery Stock **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 MPI-accredited facilities (quarantine stations)

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Citrus*, the accredited facility operator must also have an agreement with MPI 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) <u>Inspection, Testing and Treatments of the consignment</u>

The inspection, testing and treatment requirements for specified regulated pests must be undertaken at the accredited facility as specified in the agreement between MPI 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 MPI 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 MPI (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 MPI-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 MPI, 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 MPI 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) <u>Post-entry quarantine</u>

**PEQ**: Level 2. Plants must be held at 18-25°C throughout the quarantine period. **Quarantine Period**: This is the time required to complete inspections and/or indexing to detect regulated pathogens. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required. Indicative minimum quarantine periods are:

- 6 months for *Citrus* cuttings sourced from mother plants that have been kept in insect proof plant houses, which may be extended to 12 months to allow for testing to be completed; or
- 16 months for *Citrus* cuttings sourced directly from open ground mother plants.

## 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 MPI 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 MPI (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 MPI, and to conform with the current phytosanitary requirements of MPI."

# (iv) <u>Inspection, Testing and Treatments of the consignment</u>

Following inspection at the border, upon arrival, the *Citrus* cuttings will be directed to a facility accredited to the 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 MPI-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 MPI-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 MPI-accredited facilities

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Citrus*, the accredited facility operator must also have an agreement with MPI 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) <u>Pest proof container and growing media for tissue culture</u>

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 MPI 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 MPI 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 MPI (refer to the pest list).

#### **AND**

- held and tested for/classified free from specified regulated pests at a MPI-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 MPI, 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 MPI 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) <u>Documentation</u>

# 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) <u>Pest proof container and growing media for tissue culture</u>

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 MPI 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 MPI (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 MPI, and to conform with the current phytosanitary requirements of MPI."

# (v) <u>Inspection, Testing and Treatments of the consignment</u>

Upon arrival, the inspection, treatment and testing requirements for specified pests must be undertaken at a New Zealand Level 3 MPI-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 indistinctashot-hole borerApate terebransshot-hole borer

Buprestidae

Agrilus alesiflatheaded citrus borerAgrilus auriventriscitrus 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 porosapitted apple beetleLuperomorpha funestamulberry flea beetleMonolepta australisred-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 recticollis

Diaprepes abbreviatus citrus weevil

Diaprepes spp.

Eutinophaea bicristatacitrus leaf-eating weevilLeptopius squalidusfruit tree root weevilNaupactus xanthographusfruit tree weevilOtiorhynchus cribricolliscribrate weevil

Pachnaeus citri -

Pachnaeus litus citrus root weevil
Perperus lateralis white-striped weevil

Prepodes spp.

Protostrophus avidus weevil

Sciobius marshalli citrus snout beetle

Sympiezomias lewisi -

Lucanidae

Prosopocoilus spencei -

Scarabaeidae

Hypopholis indistinctascarab beetleMaladera matridascarab beetle

Scolytidae

Salagena sp. -

Xylosandrus germanus alnus ambrosia beetle

Diptera

Cecidomyiidae

Contarinia citri leafcurling midge
Contarinia okadai citrus flower gall midge

Trisopsis sp. -

Chamaemyiidae

Leucopis alticeps [Animals Biosecurity] -

Drosophilidae

Drosophila paulistorum Drosophila pseudoobscura Drosophila simulans Drosophila willistoni -

Tephritidae

Dirioxa pornia island fruit fly

Hemiptera

Anthocoridae

Orius thripoborus [Animals Biosecurity] Thriphleps thripoborus [Animals Biosecurity] -

Coreidae

Acanthocoris striicornislarger squash bugAnoplocnemis curvipescoreid bugLeptoglossus membranaceuscoreid bugMictis profanacrusader bugParadasynus spinosussquash bugVeneza phyllopusleaf-footed bug

Lygaeidae

Nysius vinitor Rutherglen bug

Miridae

Austropeplus sp. citrus blossom bug

Pentatomidae

Antestia variegata antestia bug

Antestiopsis orbitalis -

Antestiopsis variegataantestia bugBiprorulus bibaxspined citrus bugGlaucias subpunctatuspolished green stink bugHalyomorpha mistabrown-marmorated stink bug

Musgraveia sulciventrisbronze orange bugPlautia stalioriental stink bugRhynchocoris humeralispentatomid bug

Unknown Hemiptera

Holopterna vulga bug

Homoptera

Aleyrodidae

Aleurocanthus citriperdus whitefly

Aleurocanthus spiniferus orange spiny whitefly

Aleurocanthus spp.whitefliesAleurocanthus woglumicitrus blackflyAleurodicus dispersusspiralling whiteflyAleurolobus marlattiMarlatt whitefly

Ministry for Primary Industries Import Health Standard 155.02.06: Importation of Nursery Stock Aleuroplatus sp. whitefly
Aleurothrixus floccosus woolly whitefly
Aleurotuba jelinekii -

Aleurotuberculatus aucubae aucuba whitefly Bemisia citricola -

Dialeurodes citri citrus whitefly
Dialeurodes citrifolii cloudywinged whitefly

Dialeurolonga sp. - cloudywniged winterly

Parabemisia myricae
Siphoninus phillyreae
Japanese bayberry whitefly
phillyrea whitefly

Aphididae philiyreae philiyrea white

Aphis fabae bean aphid Aulacorthum magnoliae Japanese elder aphid

Cicadellidae
Asymmetrasca decedens leafhopper

Circulifer opacipennis Circulifer tenellus beet leafhopper
Cuerna costalis leafhopper

Edwardsiana flavescens leafhopper
Empoasca bodenheimeri -

Empoasca citrusa green citrus leafhopper Empoasca decipiens green leafhopper Empoasca distinguenda -

Empoasca fabaepotato leafhopperEmpoasca onukiitea green leafhopperHomalodisca coagulataglassy-winged sharpshooter

Homalodisca lacerta-Jacobiasca lybicacotton jassidNeoaliturus haematocepsleafhopperPenthimiola bellacitrus leafhopperScaphytopius nitridusleafhopper

Cicadidae

Cryptotympana facialis black cicada

Meimuna opalifera elongate cicada

Coccidae

Ceroplastes floridensis Florida wax scale

Ceroplastes japonicus pink wax scale
Ceroplastes rubens red wax scale
Ceroplastes rusci fig wax scale
Coccus celatus -

Coccus pseudomagnoliarum citricola scale

Coccus viridis green scale

Cribrolecanium andersoniwhite powdery scaleGascardia brevicaudawhite waxy scaleProtopulvinaria pyriformispyriform scalePulvinaria aethiopicasoft green scalePulvinaria aurantiicitrus cottony scalePulvinaria cellulosapulvinaria scale

Saissetia citricola citrus string cottony scale

Saissetia somereni -

Dactylopiidae
Dactylopius filamentosis -

Dactylopius vastator 
Diaspididae -

Aonidiella citrinayellow scaleChrysomphalus aonidumFlorida red scaleChrysomphalus bifasciculatusbrown scale

Chrysomphalus dictyospermidictyospermum scaleChrysomphalus pinnuliferafalse purple scaleIschnaspis longirostrisblack thread scale

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

Encarsia lounsburyi [Animals Biosecurity] Encarsia opulenta [Animals Biosecurity] Encarsia smithi [Animals Biosecurity] Eretmocerus serius [Animals Biosecurity]

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

Trichogramma platneri [Animals Biosecurity] -

Vespidae

Polistes spp. [Animals Biosecurity] paper wasps

Isoptera

Termitidae

Odontotermes lokanandi termite

Lepidoptera Arctiidae

Lemyra imparilis mulberry tiger moth

Blastobasidae

Holcocera iceryaeella -

Cosmopterigidae

Pyroderces rileyi pink scavenger caterpillar

Geometridae

Anacamptodes fragilariakoa haole looperAscotis selenaria reciprocariacitrus looperGymnoscelis rufifasciatageometrid moth

Hyposidra talaca -

Gracillariidae

Phyllocnistis citrella citrus leafminer

Hepialidae

Endoclita excrescens Japanese swift moth

Endoclita sinensis -

Lvcaenidae

Virachola isocrates pomegranate butterfly

Lymantriidae

Orgyia vetusta western tussock moth

Metarbelidae

Indarbela tetraonis stem borer

Noctuidae

Arcte coerula fruit-piercing moth
Eudocima fullonia fruit-piercing moth

Helicoverpa assultacape gooseberry budwormHelicoverpa punctigeraoriental tobacco budwormTiracola plagiatabanana fruit caterpillar

Xylomyges curialis noctuid moth

Nymphalidae

Charaxes jasius nymphalid butterfly

Oecophoridae

Psorosticha melanocrepidacitrus leafrollerPsorosticha zizyphicitrus leafrollerStathmopoda auriferellaapple heliodinid

Papilionidae

Papilio aegeus aegeus -

Papilio anactus small citrus butterfly

Papilio cresphontes orange dog

Papilio dardanus cenea -

Papilio demodocus orange dog

Papilio demoleus demoleus Papilio helenus nicconicolens Papilio machaon asiatica -

Papilio memnon citrus swallowtail

Papilio memnon thunbergii Papilio nireus lyaeus Papilio polytes polytes Papilio protenor demetrius -

Papilio xuthuscitrus swallowtailPapilio zelicaonanise swallowtail

Psychidae

Eumeta hardenbergi -

Eumeta japonica -

Eumeta minuscula tea bagworm

Eumeta moddermanni -

Hyalarcta huebneri leaf case moth

Pyralidae

Apomyelois ceratoniae date pyralid

Tortricidae

Adoxophyes sp. -

Amorbia cuneana leafroller

Archips argyrospilus fruit tree leafroller

Archips machlopisleafrollerArchips occidentalisleafrollerArchips rosanusrose leafrollerArgyrotaenia citranaorange tortrixCacoecimorpha pronubanacarnation leafroller

Cryptophlebia batrachopa -

Cryptophlebia leucotretafalse codling mothHomona magnanimaoriental tea tortrixIsotenes miseranaorange fruitborerPlatynota stultanaomnivorous leafroller

Tortrix capensana tortricid moth

**Yponomeutidae** 

Prays citri citrus flower moth Prays parilis citrus flower moth

Neuroptera

Chrysopidae

Chrysopa oculata [Animals Biosecurity] -

Coniopterygidae

Coniopteryx vicina [Animals Biosecurity] Conwentzia barretti [Animals Biosecurity] -

Orthoptera

Acrididae

Zonocerus elegans elegant grasshopper

Gryllidae

Ornebius kanetataki cricket

Tettigoniidae

Caedicia sp. -

Holochlora japonicaJapanese broadwinged katydidMicrocentrum retinervesmaller angular-winged katydid

Scudderia furcata fork-tailed bush katydid

**Psocoptera** 

Archipsocidae

Archipsocus sp. bark louse

Thysanoptera

Aeolothripidae

Franklinothrips vespiformis [Animals Biosecurity] -

**Thripidae** 

Chaetanaphothrips orchidiibanana rust thripsLeptothrips maliblack hunter thripsScirtothrips aurantiicitrus thripsScirtothrips citricitrus thripsScirtothrips dorsalischilli thrips

Scirtothrips mangiferae mango thrips
Scolothrips sexmaculatus [Animals Biosecurity] -

Taeniothrips kellyanus-Taeniothrips sp.-Thrips coloratusthripsThrips flavusflower thripsThrips palmipalm thrips

Unknown Insecta

# Unknown Insecta Cosmophyllum pallidulum

Arachnida

Mite

Acarina

Acaridae

Thyreophagus entomophagus italicus [Animals

Biosecurity] **Anystidae** 

Anystis agilis [Animals Biosecurity]

Eriophyidae

Aculops pelekassi eriophyid mite
Tegolophus australis brown citrus mite

Phytoseiidae

Amblyseius addoensis [Animals Biosecurity] Amblyseius citri [Animals Biosecurity] Amblyseius swirskii [Animals Biosecurity] Euseius hibisci [Animals Biosecurity] Euseius scutalis [Animals Biosecurity] Euseius stipulatus [Animals Biosecurity] Euseius tularensis [Animals Biosecurity] -

Iphiseius degenerans [Animals Biosecurity] predatory mite

Typhlodromus athiasae [Animals Biosecurity]

Stigmaeidae

Agistemus africanus [Animals Biosecurity] Agistemus tranatalensis [Animals Biosecurity] Eryngiopus siculus [Animals Biosecurity] -

Tarsonemidae

Tarsonemus cryptocephalus [Animals Biosecurity]

**Tenuipalpidae** 

Brevipalpus chilensisfalse spider miteBrevipalpus lewisibunch miteBrevipalpus obovatusprivet miteTenuipalpus emeticae [Animals Biosecurity]-

Tuckerella ornata -

Ultratenuipalpus gonianaensis tenuipalpid mite

Tetranychidae

Calacarus citrifolii clover mite Eotetranychus kankitus tetranychid mite Eotetranychus lewisi big beaked plum mite Eotetranychus yumensis Yumi spider mite Eutetranychus africanus tetranychid mite Eutetranychus banksi Texus citrus mite pear leaf blister mite Eutetranychus orientalis Oligonychus mangiferus mango spider mite Tetranychus kanzawai kanzawa mite

Tuckerellidae

Tuckerella knorri hawthorn spider mite

**Spider** 

Arachnida

Araneae

Clubionidae

Cheiracanthium mildei [Animals Biosecurity]

Theridiidae

Theridion sp. [Animals Biosecurity]

Mollusc

Gastropoda

Stylommatophora Achatinidae Achatina immaculata Lissachatina immaculata snail Bradybaenidae Acusta despecta sieboldiana snail Subulinidae Rumina decollata snail Urocyclidae Urocyclus flavescens Urocyclus kirkii **Fungus** Ascomycota **Diaporthales** Valsaceae Diaporthe rudis (anamorph Phomopsis rudis) phomopsis canker **Dothideales** Elsinoaceae Elsinoe australis sweet orange scab Capnodiaceae Capnodium citri sooty mould Didymosphaeriaceae Didymosphaeria sp. **Microascales** Ceratocysticaceae Ceratocystis fimbriata Mycosphaerellaceae Guignardia citricarpa (anamorph Phyllosticta citrus black spot citricarpa) [black spot strain] Mycosphaerella citri (anamorph Stenella citri-grisea) rind blotch Mycosphaerella horii greasy spot **Patellariales** Patellariaceae Rhytidhysteron rufulum Saccharomycetales Saccharomycetaceae Debaryomyces hansenii Galactomyces citri-aurantii (anamorph Geotrichum sour rot citri-aurantii) **Basidiomycota: Agaricomycetes** Hymenochaetales Hymenochaetaceae Phellinus noxius brown root rot **Basidiomycota: Basidiomycetes Boletales** Coniophoraceae Coniophora eremophila brown wood rot **Basidiomycota: Teliomycetes** Septobasidiales Septobasidiaceae Septobasidium pseudopedicellatum felt fungus Mitosporic Fungi **Unknown Mitosporic Fungi** Unknown Mitosporic Fungi Sphaceloma fawcettii var. scabiosa Mitosporic Fungi (Coelomycetes) **Sphaeropsidales** Sphaerioidaceae

Macrophoma mantegazziana

Phoma erratica var. mikan ---

Phoma tracheiphilamal seccoPhomopsis sp.rotSeptoria spp.-

Sphaeropsis tumefaciens stem gall

**Unknown Coelomycetes** 

**Unknown Coelomycetes** 

Aschersonia placenta [Animals Biosecurity] -Gloeosporium foliicolum fruit rot

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales Dematiaceae

Alternaria limicola -Alternaria pellucida -Cercospora microsora --

Phaeoramularia angolensis cercospora spot

Stemphylium rosarium ---

Ulocladium obovoideum ulocladium rot

Unknown Hyphomycetes

**Unknown Hyphomycetes** 

Aureobasidium sp. Hirsutella thompsonii [Animals Biosecurity] -Isaria sp. [Animals Biosecurity] --

Oidium tingitaninum powdery mildew

Sporobolomyces roseus --Stenella sp. --

Zygomycota: Zygomycetes

Glomales Glomaceae

Glomus etunicatum [Animals Biosecurity] ---

Mucorales

Syncephalastraceae

Syncephalastrum racemosum --

**Bacterium** 

**Bacterium family unknown** 

Liberobacter africanumcitrus greening bacteriumLiberobacter asiaticumcitrus greening bacteriumLiberobacter sp.citrus greening bacterium

Spiroplasma citri citrus stubborn

Pseudomonadaceae

Burkholderia cepacia sour skin Xanthomonas axonopodis pv. citri citrus canker

Xanthomonas campestris pv. aurantifolii

Xanthomonas campestris pv. citrumelo citrus bacterial spot Xylella fastidiosa Pierce's disease

Xylella fastidiosa pv. citri variegated chlorosis of citrus

Virus

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 [Natsudaidai dwarf strain]
xyloporosis viroid
yellow vein clearing of lemon
-

# Phytoplasma

Candidatus 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 cristacortis 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	MPI ACCEPTABLE METHODS
Insects	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of
	the basic conditions).
Mites	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the
1111000	basic conditions).
Fungus	Country freedom OR growing season inspection for symptom expression.
Bacterium	Country recedon on growing season inspection for symptom expression.
Burkholderia cepacia	Growing season inspection for symptom expression.
Liberobacter africanum	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.
Liberobacter asiaticum	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.
Spiroplasma citri	Country freedom/shoot tip grafting. Graft inoculated sweet orange, 27 to 32°C.
<i>Бриоріазна син</i>	Bioassay = culture petiole new flush tissue. Collect tissue after several days at hot
	temperature (> 30°C) and incubate cultures at 32°C.
Xanthomonas	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR
axonopodis pv. citri	suitable citrus indicator.
Xanthomonas	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR
campestris pv.	suitable citrus indicator.
aurantifolii	
Xanthomonas	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR
campestris pv. citrumelo	suitable citrus indicator.
Xylella fastidiosa	Country freedom/shoot tip grafting bioassay/ PCR/ELISA OR suitable citrus
•	indicator.
Xylella fastidiosa pv.	Country freedom/shoot tip grafting bioassay PCR/ELISA OR suitable citrus
citri	indicator.
Virus	
citrus chlorotic dwarf	Country freedom OR graft inoculated rough lemon at cool temperatures
	temperatures 18 to 25°C.
citrus infectious	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow
variegation ilarvirus	indicators at cool temperatures 18 to 25°C.
citrus infectious	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow
variegation ilarvirus	indicators at cool temperatures 18 to 25°C.
[crinkly leaf strain]	
citrus leaf rugose	Country freedom OR graft inoculated Mexican lime or sour orange. Grow
ilarvirus	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	Country freedom OR graft inoculated sweet orange. Grow indicators at cool
rhabdovirus	temperatures 18 to 25°C.
citrus mosaic virus	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures
-14	18 to 25°C.
citrus ringspot virus	Country freedom OR graft inoculated dweet tangor, sweet orange, mandarin
aitmaa tattan laaf	(Parson's Special). Grow indicators at cool temperatures 18 to 25°C.
citrus tatter leaf	Country freedom OR graft inoculated Rusk citrange, rough lemon, Citrus excelsa,
capillovirus citrus tristeza	citrange (Troyer). Grow indicators at cool temperatures 18 to 25°C.  Country freedom OR ELISA, graft inoculated Mexican lime, sour orange and <i>Citrus</i>
closterovirus [strains not	excelsa. Grow indicators at cool temperatures 18 to 25°C.
in New Zealand]	concessa. Grow indicators at coor temperatures 10 to 25 C.
citrus yellow mosaic	Country freedom OR graft inoculated sweet orange, sour orange and citron.
badnavirus	Country meetion on grant moediated sweet orange, sour orange and ention.
citrus yellow mottle	Country freedom OR other suitable test.
virus	
Indian citrus mosaic	Country freedom OR graft inoculated sweet orange at hot temperature 27 to 32°C.
	, 2 8
badnavirus	
navel orange infectious	Country freedom OR graft inoculated Satsums. Grow indicators at cool

ORGANISM TYPES	MPI ACCEPTABLE METHODS
satsuma dwarf	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures
nepovirus	18 to 25°C.
satsuma dwarf	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures
nepovirus [Natsudaidai	18 to 25°C.
dwarf strain]	
yellow vein clearing of	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators
lemon	at cool temperatures 18 to 25°C.
Viroid	
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-	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow
IV)	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.
Disease of unknown aeti	_ Ct
Australian citrus	Country freedom OR other suitable test
dieback	
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 Citrus macrophylla.
citrus impietratura	Country freedom OR graft inoculated dweet tangor or sweet orange. Growth
disease	indicators at cool temperatures 18 to 25°C.
citrus sunken vein	Country freedom OR other suitable test.
disease	
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.
cristacortis	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
77 1 1	temperature 27 to 32°C.
Kassala disease	Country freedom, cuttings collected from kassala free area.
lemon sieve tube	Country freedom OR other suitable test.
necrosis	
shell bark of lemons	Country freedom OR other suitable test.
zonate chlorosis	Country freedom, cuttings collected from kassala free area.
Phytoplasma	
Candidatus phytoplasma	
aurantifolia	to 25°C.
rubbery wood	Country freedom OR graft inoculated sweet orange or lemon. Grow citron at hot
	temperature 27 to 32°C.

<sup>\*</sup> Country freedom is accepted as equivalence to a treatment.

#### **Notes:**

- The unit for testing is defined in section 2.3.2.1.
   With prior notification, MPI will accept other internationally recognised testing methods.

**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) \_\_\_\_\_".

**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

Conditions for *Phytophthora ramorum* (section 2.2.1.11)

**B.** Tissue Cultures: **PEO**: 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 *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

PEO: Level 2

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (see section 2.2.1.11)
- b. Conditions for *Xylella fastidiosa* (see section 2.2.1.12)
   Guidance for importers: The minimum quarantine period will be 6 months for nursery stock sourced from countries not recognised by MPI as free from Xylella fastidiosa
- c. 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) $"$ .	
ΛD		

OR

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

d. Additional declaration: "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water, prior to export".

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

a. Conditions for *Xylella fastidiosa* on tissue culture (see section 2.2.2.5)
 Guidance for importers: The minimum quarantine period will be 6 months in Level 2 PEQ for nursery stock sourced from countries not recognised by MPI as free from Xylella fastidiosa

**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; Phellinus

noxius

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

## A. For Whole Plants:

# **OPTION 1**

**PEQ:** Level 2

Minimum Period: 6 months

a. Conditions for *Phellinus noxius* (section 2.2.1.13)

Note: Only applies to members of the Crataegus genus

# b. Additional declaration:

"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) \_".

# c. Additional declaration:

"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

a. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note**: Only applies to members of the *Crataegus* genus

# **B.** For Tissue Cultures:

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MPI-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 *Crocosmia*", 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 <u>other than</u> 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 *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 MPI-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 bulb certification scheme."

OR

2) For bulbs NOT produced under a MPI-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: PEO:** Level 1

**Minimum Period:** 3 months

C. For Dormant Bulbs from Countries <u>other than</u> 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, Guatemala, Italy, Puerto Rico, Singapore, Taiwan, Thailand, U.S. Virgin Islands, the USA (Florida and Hawaii) and Vietnam.

Quarantine Pests: Aulacaspis yasumatsui, Demyrsus meleoides, Phellinus noxius

**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 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 *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*; *Potato spindle tuber viroid*<sup>1</sup>; *Tetranychus kanzawai*; Uredinales

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

#### A. For Whole Plants

PEO: Level 2

**Minimum Period**: 3 months **Additional Declarations**:

- **1.** "The nursery stock in this consignment has been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".
- 2. "Rust diseases are not known to occur on *Dahlia* in \_ (the country in which the plants were grown) \_".
- **3.** "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 MPI-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 bulb certification scheme.

**AND** 

The bulbs have been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

## OR

2) For bulbs NOT produced under a MPI-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,

<sup>&</sup>lt;sup>1</sup> Requirements for *Potato spindle tuber viroid* will commence on 1 September 2014: All phytosanitary certificates issued on or after 1 September 2014 must be endorsed with the correct additional declarations for *Potato spindle tuber viroid*.

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

The bulbs have been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

# **OPTION 2:**

**PEO:** Level 1

**Minimum Period:** 3 months **Additional Declaration(s):** 

The bulbs have been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

## 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".

  AND
- **2.** The dormant bulbs have been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

  AND
- **3.i)** "The dormant tubers have been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*".

#### OR

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

AND for consignments with a "Pest free place of production" declaration for *Phymatotrichopsis omnivoria*:

- 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**

- 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 <u>other than</u> 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."

#### **AND**

**2.** "The bulbs have been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

**AND** 

**3.i)** "The dormant bulbs have been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*".

#### OR

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

AND for consignments with a "Pest free place of production" declaration for *Phymatotrichopsis omnivoria*:

- 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**

- 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 sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid* AND tested and found free of virus diseases."

## OR

"The cultures have been derived from parent stock tested by PCR and found free from *Potato* spindle tuber viroid AND 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 *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**: Ceratocystis fimbriata; Phellinus noxius; Xylella fastidiosa; Uredinales

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

## A. For Whole Plants:

**PEO**: Level 2

**Minimum Period**: 3 months

a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8)

Note: Only applies to members of the Erythrina genus

b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

**Note:** Only applies to the members of the *Convolvulus, Crepis, Geranium, Phyllanthus, Salvia* and *Senecio* genera

**Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa* 

c. Conditions for *Phellinus noxius* (section 2.2.1.13)

**Note**: Applies to the following species: *Barleria cristata* and applies to all members of the *Erythrina* genus

d. 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.

**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  $1.5^{\circ}C \pm 0.5^{\circ}C$  for 2 days, then fumigated with methyl bromide at  $14g/m^3$  for 4 hours at  $15^{\circ}C$  and packed so that re-infestation with insects cannot occur."

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

**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 *Diascia*", and are additional to those specified in sections 1, 2 and 3 of the import health standard.

## **GENERAL CONDITIONS:**

**Approved Countries**: All

**Quarantine Pests**: Potato spindle tuber viroid<sup>1</sup>

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

## A. For Whole Plants and Cuttings:

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

**Additional declaration:** 

"The nursery stock in this consignment has been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

#### **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 sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

"The cultures have been derived from parent stock tested by PCR and found free from *Potato* spindle tuber viroid".

-

<sup>&</sup>lt;sup>1</sup> Requirements for *Potato spindle tuber viroid* will commence on 1 September 2014: All phytosanitary certificates issued on or after 1 September 2014 must be endorsed with the correct additional declarations for *Potato spindle tuber viroid*.

**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:

**PEO:** 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 <u>other than</u> Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, The Netherlands, Portugal, South Africa, Spain, Sweden, United Kingdom, USA:

**PEO:** 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 Culture:**

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 *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; Phellinus noxius; 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 2.2.1.12)
 Guidance for importers: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*

b. Conditions for *Phellinus noxius* (section 2.2.1.13)

#### **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 *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

## **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*."

## **Treatment for dormant cuttings:**

Dormant cuttings must be treated for regulated insects and mites as described in section 2.2.1.6 (part B) of the Basic Conditions.

## Treatment for non-dormant cuttings and whole plants (excluding *Dracaena deremensis*):

Non-dormant cuttings and whole plants must be treated for regulated insects and mites on arrival in New Zealand using methyl bromide fumigation as described in section 2.2.1.6 (part B) of the Basic Conditions. Methyl bromide may be damaging to some *Dracaena* species and is carried out at the importer's risk.

## Treatment for non-dormant cuttings and whole plants of Dracaena deremenisis ONLY:

Prior to export the nursery stock must be treated for regulated insects and mites as described in section 2.2.1.6 (part B) of the Basic Conditions. On arrival in New Zealand, the importer has the option to treat the non-dormant cuttings or whole plants using the alternate chemical treatment listed below **OR** methyl bromide fumigation as described in section 2.2.1.6 (part B) of the Basic Conditions.

- 1. The foliage of imported plants shall be dipped in a combination of pesticides, from two different chemical groups, as specified below in Table 1. Dipping is to occur at room temperature, and the treatment time is 2-5 minutes.
- 2. 10-14 days after the initial dipping treatment, the consignment must be spray treated in PEQ with a combination of pesticides from two different chemical groups as specified in Table 1.

Table 1 Alternate treatment for Dracaena deremensis

Chemical group	Active ingredient (a.i.)	Rate
Organophosphorous	Acephate	0.8 g a.i. per litre of dip
	Dimethoate	1.1 g a.i. per litre of dip
Carbamate	Carbaryl	1.2 g a.i. per litre of dip
Spinosyns	Spinosad	2.0 g a.i. per litre of dip

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

#### Measures for Pantoea ananatis:

The following measures will apply to **all** *Dracaena* species on entry into New Zealand or while in post entry quarantine.

- If plants exhibit any symptoms that may be indicative of infection with *Pantoea ananatis*, samples will be collected and submitted for diagnostic testing.
- If any plants are identified as being infected with *Pantoea ananatis*, the whole consignment must be either reshipped or destroyed, at the expense of the importer.

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

**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**: Ceratocystis fimbriata, Phellinus noxius; 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

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13)

Note: Only applies to the following species: Eriobotrya japonica

c. 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:

**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:** Ceratocystis fimbriata; Puccinia psidii sensu lato (s.l.) complex (including Uredo rangelii); Chrysoporthe cubensis; Endothia havanensis; Mycosphaerella parva; Phellinus noxius; Phytophthora ramorum; 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 *Ceratocystis fimbriata* (section 2.2.1.8)
- b. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- c. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
- d. Conditions for *Phellinus noxious* (section 2.2.1.13)

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

#### **OPTION 1:**

- a. Additional declaration:
  - "Puccinia psidii s.l. complex (including Uredo rangelii) is not known to occur in (the country of origin)".

#### OR

- "The tissue cultures in this consignment have been actively growing in the culture container for at least four weeks at temperatures between 15 23°C (59 73.4°F)".
- b. The tissue cultures are subject to examination at a MPI-registered laboratory at the importers expense, prior to release to the importer.

## **OPTION 2:**

**PEQ**: Level 2 Tissue culture laboratory

Minimum Period: 4 weeks

a. The cultures containers are not to be opened during the quarantine period.

**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:** *Phellinuis noxius; Puccinia psidii* sensu lato (s.l.) complex (including *Uredo rangelii*); *Xylella fastidiosa* 

## **Entry Conditions:**

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

#### A. For Whole Plants:

## **OPTION 1:**

**PEO**: Level 2

**Minimum Period**: 6 months

- a. Conditions for *Xylella fastidiosa* (see section 2.2.1.12)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13)

Note: Only applies to the following species: Syzygium samarangense

- c. Additional declaration:
  - "Puccinia psidii s.l. complex (including Uredo rangelii) is not known to occur in (the country of origin)".

#### **OPTION 2:**

**PEO**: Level 3

**Minimum Period**: 6 months

- a. Conditions for *Xylella fastidiosa* (see section 2.2.1.12)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13)

Note: Only applies to the following species: Syzygium samarangense

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

#### **OPTION 1:**

- a. Additional declaration:
- "Puccinia psidii s.l. complex (including Uredo rangelii) is not known to occur in (the country of origin)".

OR

- "The tissue cultures in this consignment have been actively growing in the culture container for at least four weeks at temperatures between 15 - 23°C (59 - 73.4°F)".

#### **OPTION 2:**

PEQ: Level 2 Tissue culture laboratory

Minimum Period: 4 weeks

a. The cultures containers are not to be opened during the quarantine period.

**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

**PEO**: Level 2

**Minimum Period**: 3 months

a.	Conditions for <i>Xylella fastidiosa</i> (section 2.2.1.12)
	Guidance for importers: The minimum quarantine period will be 6 months for nursery stock
	sourced from countries <u>not</u> recognised by MPI as free from <i>Xylella fastidiosa</i>

b.	Additional declaration: "F	Rust	diseases of genus <i>Coleo</i>	<i>sporium</i> 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:**

**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 MPI-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:

**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:** Ceratocystis fimbriata; Cronartium quercuum; Phytopthora ramorum; Xylella fastidiosa; Tortricidae

#### **Entry Conditions:**

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

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

## **OPTION 1:**

**PEQ:** Level 2

Minimum Period: 6 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Fagus* genus
- b. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- c. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note:** Only applies to the members of the *Fagus* genus
- d. Additional declaration:

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

## **OPTION 2:**

**PEQ:** Level 3

**Minimum Period:** 6 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Fagus* genus
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note:** Only applies to members of the species *Fagus* genus

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

**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*", 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: Ceratocystis fimbriata; Cronartium quercuum; Cryphonectria parasitica; Phytophthora ramorum; Tortricidae; Xylella fastidiosa

**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. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Fagus* genus
- b. Additional declaration for Cryphonectria parasitica:
  - "Cryphonectria parasitica is not known to occur in \_\_\_\_\_ (the country or state where the plants/cuttings) were grown \_\_\_\_\_".

**OR** (for cuttings only)

-"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)

- -"The plants were inspected during the previous growing season and no *Cryphonectria parasitica* was detected".
- c. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- d. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
- e. Additional declaration: "The plants have been dipped in propiconazole at the rate of 0.5g a.i. per litre of water."

## **OPTION 2:**

**PEQ:** Level 3

**Minimum Period:** 6 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Fagus* genus
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

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

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MPI 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 *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: Ceratocystis fimbriata; Phellinus noxius; Uredo ficina; Xylella fastidiosa

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

## A. For Whole Plants:

**PEQ**: Level 2

**Minimum Period**: 3 months

Note: Nursery stock of Ficus microcarpa must be free of flowers and fruit.

a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8)

Note: Only applies to the following species: Ficus carica

b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

**Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa* 

- c. Conditions for *Phellinus noxius* (section 2.2.1.13)
- d. 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*"

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

**PEQ**: Level 2

**Minimum Period**: 3 months

a. 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:** 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 MPI-accredited facilities (quarantine stations)

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Fortunella*, the accredited facility operator must also have an agreement with MPI 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) <u>Inspection, Testing and Treatments of the consignment</u>

The inspection, testing and treatment requirements for specified regulated pests must be undertaken at the accredited facility as specified in the agreement between MPI 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 MPI 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 MPI (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 MPIaccredited facility

#### **AND**

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

## (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 MPI, 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 MPI 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) <u>Post-entry quarantine</u>

**PEQ**: Level 2. Plants must be held at 18-25°C throughout the quarantine period. **Quarantine Period**: This is the time required to complete inspections and/or indexing to detect regulated pathogens. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required. Indicative minimum quarantine periods are:

- 6 months for *Fortunella* cuttings sourced from mother plants that have been kept in insect proof plant houses, which may be extended to 12 months to allow for testing to be completed; or
- 16 months for *Fortunella* cuttings sourced directly from open ground mother plants.

## 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 MPI 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 MPI (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 MPI, and to conform with the current phytosanitary requirements of MPI."

## (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 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 MPI-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 MPI-accredited facility. Refer to *Fortunella* Inspection, Testing and Treatment Requirements following the *Fortunella* pest list.

## (v) <u>Post-entry quarantine</u>

**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 MPI-accredited facilities

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Fortunella*, the accredited facility operator must also have an agreement with MPI 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) <u>Pest proof container and growing media for tissue culture</u>

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 MPI 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 MPI 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 MPI (refer to the pest list).

#### **AND**

- held and tested for/classified free from specified regulated pests at a MPIaccredited 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 MPI, 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 MPI 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) <u>Pest proof container and growing media for tissue culture</u>

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 MPI 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 MPI (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 MPI, and to conform with the current phytosanitary requirements of MPI."

## (v) <u>Inspection, Testing and Treatments of the consignment</u>

Upon arrival, the inspection, treatment and testing requirements for specified pests must be undertaken at a New Zealand Level 3 MPI-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)**

Insecta Insecta

Coleoptera

Bostrichidae

Apate indistinctashot-hole borerApate terebransshot-hole borer

Buprestidae

Agrilus alesiflatheaded citrus borerAgrilus auriventriscitrus flatheaded borer

Cerambycidae

Anoplophora malasiaca white-spotted longicorn beetle

Chelidonium gibbicolle -

Dihammus vastator fig longhorn

Melanauster chinensis

Paradisterna plumifera speckled longicorn

Promeces linearis

Skeletodes tetropslonghorn beetleStrongylurus thoracicuspittosporum longicornUracanthus cryptophaguscitrus branch borer

Chrysomelidae

Colasposoma fulgidum bluegreen citrus nibbler

Colasposoma scutellare

Geloptera porosapitted apple beetleLuperomorpha funestamulberry flea beetleMonolepta australisred-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 recticollis -

Diaprepes abbreviatus citrus weevil

Diaprepes spp.

Eutinophaea bicristatacitrus leaf-eating weevilLeptopius squalidusfruit tree root weevilNaupactus xanthographusfruit tree weevilOtiorhynchus cribricolliscribrate weevil

Pachnaeus citri -

Pachnaeus litus citrus root weevil
Perperus lateralis white-striped weevil

Prepodes spp.

Protostrophus avidus weevil

Sciobius marshalli citrus snout beetle

Sympiezomias lewisi

Lucanidae

Prosopocoilus spencei

Scarabaeidae

Hypopholis indistincta scarab beetle Maladera matrida scarab beetle

Scolvtidae

Salagena sp.

Xylosandrus germanus alnus ambrosia beetle

Diptera

**Cecidomyiidae** 

Contarinia citri leafcurling midge Contarinia okadai citrus flower gall midge

Trisopsis sp.

Chamaemyiidae

Leucopis alticeps [Animals Biosecurity]

Drosophilidae

Drosophila paulistorum Drosophila pseudoobscura Drosophila simulans Drosophila willistoni

**Tephritidae** 

Dirioxa pornia island fruit fly

Hemiptera

Anthocoridae

Orius thripoborus [Animals Biosecurity] Thriphleps thripoborus [Animals Biosecurity]

Coreidae

Acanthocoris striicornis larger squash bug Anoplocnemis curvipes coreid bug Leptoglossus membranaceus coreid bug crusader bug Mictis profana Paradasynus spinosus squash bug Veneza phyllopus leaf-footed bug

Lygaeidae

Nysius vinitor Rutherglen bug

Miridae

Austropeplus sp. citrus blossom bug

Pentatomidae

Antestia variegata antestia bug

Antestiopsis orbitalis

Antestiopsis variegata antestia bug Biprorulus bibax spined citrus bug Glaucias subpunctatus polished green stink bug Halyomorpha mista brown-marmorated stink bug

Musgraveia sulciventris bronze orange bug Plautia stali oriental stink bug

Rhynchocoris humeralis pentatomid bug

**Unknown Hemiptera** 

Holopterna vulga bug

Homoptera

Aleyrodidae

Aleurocanthus citriperdus whitefly

Aleurocanthus spiniferus orange spiny whitefly

whiteflies Aleurocanthus spp. Aleurocanthus woglumi citrus blackfly Aleurodicus dispersus spiralling whitefly Aleurolobus marlatti Marlatt whitefly

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Aleuroplatus sp. whitefly
Aleurothrixus floccosus woolly whitefly

Aleurotuba jelinekii

Aleurotuberculatus aucubae aucuba whitefly
Bemisia citricola -

Dialeurodes citri citrus whitefly

Dialeurodes citrifolii cloudywinged whitefly
Dialeurolonga sp. -

Parabemisia myricae Japanese bayberry whitefly

Siphoninus phillyreae phillyrea whitefly

Aphididae
Aphis fabae bean aphid

Aulacorthum magnoliae Japanese elder aphid

Cicadellidae

Asymmetrasca decedens leafhopper

Circulifer opacipennis

Circulifer tenellusbeet leafhopperCuerna costalisleafhopperEdwardsiana flavescensleafhopper

Eawarastana Jiavescens leain Empoasca bodenheimeri -

Empoasca citrusagreen citrus leafhopperEmpoasca decipiensgreen leafhopper

Empoasca distinguenda

Empoasca fabae

green leathopper

potato leafhopper

Empoasca onukii tea green leafhopper
Homalodisca coagulata glassy-winged sharpshooter

Homalodisca lacerta - grassy-winged sharpshooter

Jacobiasca lybica cotton jassid
Neoaliturus haematoceps leafhopper
Penthimiola bella citrus leafhopper

Scaphytopius nitridus leafhopper

Cicadidae

Cryptotympana facialis black cicada
Meimuna opalifera black cicada

Coccidae

Ceroplastes floridensisFlorida wax scaleCeroplastes japonicuspink wax scaleCeroplastes rubensred wax scaleCeroplastes ruscifig wax scale

Coccus celatus -

Coccus pseudomagnoliarum citricola scale
Coccus viridis green scale

Cribrolecanium andersoniwhite powdery scaleGascardia brevicaudawhite waxy scaleProtopulvinaria pyriformispyriform scalePulvinaria aethiopicasoft green scalePulvinaria aurantiicitrus cottony scalePulvinaria cellulosapulvinaria scale

Saissetia citricola citrus string cottony scale

Saissetia somereni

**Dactylopiidae** 

Dactylopius filamentosis Dactylopius vastator -

Diaspididae

Aonidiella citrina yellow scale
Chrysomphalus aonidum Florida red scale
Chrysomphalus bifasciculatus brown scale

Chrysomphalus dictyospermidictyospermum scaleChrysomphalus pinnuliferafalse purple scaleIschnaspis longirostrisblack thread scale

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

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Encarsia opulenta [Animals Biosecurity] Encarsia smithi [Animals Biosecurity] Eretmocerus serius [Animals Biosecurity]

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

Trichogramma platneri [Animals Biosecurity] -

Vespidae

Polistes spp. [Animals Biosecurity] paper wasps

Isoptera

Termitidae

Odontotermes lokanandi termite

Lepidoptera Arctiidae

Lemyra imparilis mulberry tiger moth

Blastobasidae

Holcocera iceryaeella -

Cosmopterigidae

Pyroderces rileyi pink scavenger caterpillar

Geometridae

Anacamptodes fragilariakoa haole looperAscotis selenaria reciprocariacitrus looperGymnoscelis rufifasciatageometrid moth

Hyposidra talaca

Gracillariidae

Phyllocnistis citrella citrus leafminer

Hepialidae

Endoclita excrescens Japanese swift moth

Endoclita sinensis -

Lycaenidae

Virachola isocrates pomegranate butterfly

Lymantriidae

Orgyia vetusta western tussock moth

Metarbelidae

Indarbela tetraonis stem borer

Noctuidae

Arcte coerulafruit-piercing mothEudocima fulloniafruit-piercing moth

Helicoverpa assultacape gooseberry budwormHelicoverpa punctigeraoriental tobacco budwormTiracola plagiatabanana fruit caterpillar

Xylomyges curialis noctuid moth

Nymphalidae

Charaxes jasius nymphalid butterfly

Oecophoridae

Psorosticha melanocrepidacitrus leafrollerPsorosticha zizyphicitrus leafrollerStathmopoda auriferellaapple heliodinid

Papilionidae

Papilio aegeus aegeus -

Papilio anactus small citrus butterfly

Papilio cresphontes orange dog

Papilio dardanus cenea -

Papilio demodocus orange dog

Papilio demoleus demoleus Papilio helenus nicconicolens Papilio machaon asiatica -

Papilio memnon citrus swallowtail

Papilio memnon thunbergii Papilio nireus lyaeus Papilio polytes polytes Papilio protenor demetrius -

Papilio xuthuscitrus swallowtailPapilio zelicaonanise swallowtail

**Psychidae** 

Eumeta hardenbergi -

Eumeta japonica -

Eumeta minuscula tea bagworm

Eumeta moddermanni -

Hyalarcta huebneri leaf case moth

**Pyralidae** 

Apomyelois ceratoniae date pyralid

Tortricidae

Adoxophyes sp. -

Amorbia cuneana leafroller

Archips argyrospilus fruit tree leafroller

Archips machlopisleafrollerArchips occidentalisleafrollerArchips rosanusrose leafrollerArgyrotaenia citranaorange tortrixCacoecimorpha pronubanacarnation leafroller

Cryptophlebia batrachopa -

Cryptophlebia leucotretafalse codling mothHomona magnanimaoriental tea tortrixIsotenes miseranaorange fruitborerPlatynota stultanaomnivorous leafroller

Tortrix capensana tortricid moth

Yponomeutidae

Prays citri citrus flower moth Prays parilis citrus flower moth

Neuroptera Chrysopidae

Chrysopa oculata [Animals Biosecurity]

Coniopterygidae

Coniopteryx vicina [Animals Biosecurity] Conwentzia barretti [Animals Biosecurity] -

Orthoptera Acrididae

Zonocerus elegans elegant grasshopper

Gryllidae

Ornebius kanetataki cricket

Tettigoniidae

Caedicia sp. -

Holochlora japonicaJapanese broadwinged katydidMicrocentrum retinervesmaller angular-winged katydid

Scudderia furcata fork-tailed bush katydid

Psocoptera

Archipsocidae

Archipsocus sp. bark louse

Thysanoptera Aeolothripidae

Franklinothrips vespiformis [Animals Biosecurity]

Thripidae

Chaetanaphothrips orchidiibanana rust thripsLeptothrips maliblack hunter thripsScirtothrips aurantiicitrus thripsScirtothrips citricitrus thripsScirtothrips dorsalischilli thripsScirtothrips mangiferaemango thrips

Scolothrips sexmaculatus [Animals Biosecurity] -

Taeniothrips kellyanus-Taeniothrips sp.-Thrips coloratusthripsThrips flavusflower thripsThrips palmipalm thrips

**Unknown Insecta** 

#### Unknown Insecta

Cosmophyllum pallidulum

Mite

Arachnida

Acarina

Acaridae

Thyreophagus entomophagus italicus [Animals

Biosecurity] **Anystidae** 

Anystis agilis [Animals Biosecurity]

Eriophyidae

Aculops pelekassi eriophyid mite
Tegolophus australis brown citrus mite

Phytoseiidae

Amblyseius addoensis [Animals Biosecurity] Amblyseius citri [Animals Biosecurity] Amblyseius swirskii [Animals Biosecurity] Euseius hibisci [Animals Biosecurity] Euseius scutalis [Animals Biosecurity] Euseius stipulatus [Animals Biosecurity] Euseius tularensis [Animals Biosecurity] -

Iphiseius degenerans [Animals Biosecurity] predatory mite

Typhlodromus athiasae [Animals Biosecurity] -

Stigmaeidae

Agistemus africanus [Animals Biosecurity] Agistemus tranatalensis [Animals Biosecurity] Eryngiopus siculus [Animals Biosecurity] -

Tarsonemidae

Tarsonemus cryptocephalus [Animals Biosecurity]

Tenuipalpidae

Brevipalpus chilensisfalse spider miteBrevipalpus lewisibunch miteBrevipalpus obovatusprivet miteTenuipalpus emeticae [Animals Biosecurity]-

Tuckerella ornata -

Ultratenuipalpus gonianaensis tenuipalpid mite

Tetranychidae

Calacarus citrifolii clover mite Eotetranychus kankitus tetranychid mite Eotetranychus lewisi big beaked plum mite Yumi spider mite Eotetranychus yumensis tetranychid mite Eutetranychus africanus Eutetranychus banksi Texus citrus mite pear leaf blister mite Eutetranychus orientalis Oligonychus mangiferus mango spider mite Tetranychus kanzawai kanzawa mite

Tuckerellidae

Tuckerella knorri hawthorn spider mite

**Spider** 

Arachnida

Araneae

Clubionidae

Cheiracanthium mildei [Animals Biosecurity]

Theridiidae

Theridion sp. [Animals Biosecurity]

Mollusc

Gastropoda

Stylommatophora Achatinidae Achatina immaculata Lissachatina immaculata snail Bradybaenidae Acusta despecta sieboldiana snail Subulinidae Rumina decollata snail Urocvclidae Urocyclus flavescens Urocyclus kirkii **Fungus** Ascomycota **Diaporthales** Valsaceae Diaporthe rudis (anamorph Phomopsis rudis) phomopsis canker **Dothideales** Elsinoaceae Elsinoe australis sweet orange scab Capnodiaceae Capnodium citri sooty mould Didymosphaeriaceae Didymosphaeria sp. Mycosphaerellaceae Guignardia citricarpa (anamorph Phyllosticta citrus black spot citricarpa) [black spot strain] Mycosphaerella citri (anamorph Stenella citri-grisea) rind blotch Mycosphaerella horii greasy spot **Patellariales** Patellariaceae Rhytidhysteron rufulum Saccharomycetales Saccharomycetaceae Debaryomyces hansenii Galactomyces citri-aurantii (anamorph Geotrichum sour rot citri-aurantii) **Basidiomycota: Agaricomycetes** Hymenochaetales Hymenochaetaceae Phellinus noxius brown root rot **Basidiomycota: Basidiomycetes Boletales** Coniophoraceae Coniophora eremophila brown wood rot **Basidiomycota: Teliomycetes** Septobasidiales Septobasidiaceae Septobasidium pseudopedicellatum felt fungus Mitosporic Fungi **Unknown Mitosporic Fungi** Unknown Mitosporic Fungi Sphaceloma fawcettii var. scabiosa Mitosporic Fungi (Coelomycetes) **Sphaeropsidales** Sphaerioidaceae Macrophoma mantegazziana Phoma erratica var. mikan Phoma tracheiphila mal secco

Phomopsis sp.

rot

Septoria spp. -

Sphaeropsis tumefaciens stem gall

Unknown Coelomycetes Unknown Coelomycetes

Aschersonia placenta [Animals Biosecurity]

Gloeosporium foliicolum fruit rot

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales Dematiaceae

Alternaria limicola -Alternaria pellucida -Cercospora microsora --

Phaeoramularia angolensis cercospora spot

Stemphylium rosarium ---

Ulocladium obovoideum ulocladium rot

Unknown Hyphomycetes Unknown Hyphomycetes

Aureobasidium sp. -Hirsutella thompsonii [Animals Biosecurity] -Isaria sp. [Animals Biosecurity] --

Oidium tingitaninum powdery mildew

Sporobolomyces roseus -- Stenella sp. --

**Zygomycota: Zygomycetes** 

Glomales Glomaceae

Glomus etunicatum [Animals Biosecurity] ---

Mucorales

Syncephalastraceae

Syncephalastrum racemosum -

**Bacterium** 

**Bacterium family unknown** 

Liberobacter africanumcitrus greening bacteriumLiberobacter asiaticumcitrus greening bacteriumLiberobacter sp.citrus greening bacterium

Spiroplasma citri citrus stubborn

Pseudomonadaceae

Burkholderia cepacia sour skin Xanthomonas axonopodis pv. citri citrus canker

Xanthomonas campestris pv. aurantifolii -

Xanthomonas campestris pv. citrumelo citrus bacterial spot Xylella fastidiosa Pierce's disease

Xylella fastidiosa pv. citri variegated chlorosis of citrus

Virus

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 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 [Natsudaidai dwarf strain] xyloporosis viroid yellow vein clearing of lemon -

## Phytoplasma

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

ORGANISM TYPES	MPI ACCEPTABLE METHODS		
satsuma dwarf nepovirus			
[Natsudaidai dwarf	18 to 25°C.		
strain]			
yellow vein clearing of	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators		
lemon	at cool temperatures 18 to 25°C.		
Viroid			
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-	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow citron		
IV)	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.		
Disease of unknown aeti			
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	Country freedom OR graft inoculated dweet tangor or sweet orange. Growth		
disease	indicators at cool temperatures 18 to 25°C.		
citrus sunken vein	Country freedom OR other suitable test.		
disease			
concave gum	Country freedom OR graft inoculated dweet tangor, sweet orange or Citrus excelsa.		
	Grow indicators at cool temperatures 18 to 25°C.		
cristacortis	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.		
G 1 1	Grow indicators at cool temperatures 18 to 25°C.		
Gummy bark	Country freedom OR SPAGE of graft inoculated citron extract. Grow citron at hot		
TZ 1 1'	temperature 27 to 32°C.		
Kassala disease	Country freedom, cuttings collected from kassala free area.		
lemon sieve tube	Country freedom OR other suitable test.		
necrosis			
shell bark of lemons	Country freedom OR other suitable test.		
zonate chlorosis	Country freedom, cuttings collected from kassala free area.		
Phytoplasma			
Candidatus phytoplasma	Country freedom OR graft inoculated lime. Grow indicators at cool temperatures 18		
aurantifolia	to 25°C.		
rubbery wood	Country freedom OR graft inoculated sweet orange or lemon. Grow citron at hot		
	temperature 27 to 32°C.		

<sup>\*</sup> Country freedom is accepted as equivalence to a treatment.

## **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. With prior notification, MPI will accept other internationally recognised testing methods.

**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 MPI-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 MPI-accredited facilities in any country

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Fragaria*, the accredited facility operator must also have an agreement with MPI 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 MPI 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 MPI and the [name of the MPI-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 MPI and the [name of the MPI-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) <u>Post-entry quarantine</u>

**PEQ**: All *Fragaria* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to the 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. 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) <u>Documentation</u>

**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 MPI 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 the 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 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 affinisstrawberry seed beetleHarpalus rufipesstrawberry seed beetleNebria brevicolliscommon black ground beetlePterostichus cupreusstrawberry ground beetlePterostichus madidusstrawberry ground beetlePterostichus melanariusstrawberry ground beetle

Chrysomelidae

Altica caerulescensleaf beetleChaetocnema concinnaleaf feeding beetleColaspis flavidagrape colaspisGaleruca tanacetistrawberry leaf beetleGalerucella grisescensstrawberry leaf beetleGalerucella tenellastrawberry leaf beetle

Haltica corruscafles beetleHaltica paganaflea beetle

Paria fragariae strawberry rootworm

Systena frontalis flea beetle

Curculionidae

Anthonomus rubi strawberry blossom weevil
Anthonomus signatus strawberry bud weevil

Apirocalus spp. weevils

Barypeithes pellucidusstrawberry weevilCleonus kirbyiradish weevilConotrachelus nenupharplum weevil

Donus salviaestrawberry weevilDyslobus decoratusdecorated strawberry root weevilDyslobus ursinuswestern strawberry root weevil

Dyslobus wilcoxiLacomb strawberry root weevilGeoderces spp.root weevilHaplidia etruscaroot 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 armatusstrawberry root weevilOtiorhynchus clavipesred-legged weevilOtiorhynchus cribricolliscribrate weevil

Otiorhynchus meridionalisstrawberry root weevilOtiorhynchus rotundatusstrawberry root weevilOtiorhynchus rugifronsstrawberry root weevilOtiorhynchus singularisstrawberry root weevil

Panscopus torpidusroot weevilPeritelopsis globiventrisgrey weevilPlinthodes taeniatusroot weevilPolydrusus cervinusweevil

Polydrusus sericeusgreen leaf weevilRhadinosomus lacordaireithin strawberry weevilRhinaria perdixstrawberry weevilRhynchites germanicusstrawberry rhynchitesSciaphilus asperatusstrawberry root weevilSciopithes obscurusobscure root weevil

Sitona hispidulusroot weevilStrophomorphus porcellusweevilThricolepis inornataroot weevilTrigonoscuta pilosaroot weevil

Tyloderma fragariae strawberry crown borer

Elateridae

Agriotes spp. (species not in New Zealand) click beetles

Nitidulidae

Carpophilus fumatussap beetleGlischrochilus hortensissap beetleLobiopa insularisstrawberry borerStelidota spp.sap beetles

Stelidota geminata strawberry sap beetle

Scarabaeidae

Anoplognathus porosus Christmas beetle

Cetonia spp. chafers

Cyclocephala borealis northern masked chafer

Hoplia spp.white grubsLepidiota frenchiFrench's cane grub

Melolontha melolonthacockchaferMetanastes vulgivagusblack beetlePhyllopertha horticolagarden chaferPhyllophaga decimlineataten-lined June beetle

Phyllophaga perversa western ten-lined June beetle

Popillia japonica Japanese beetle Repsimus aeneus white grub

Rhopaea magnicornis large pasture scarab
Serica spp. white grubs
Sericesthis geminata priunose scarab
Sericesthis nigrolineata dusky pasture scarab

Scolvtidae

Poecilips cardamomi bark beetle

Silphidae

Heterosilpha aenescens carrion beetle

Collembola Sminthuridae

Bourletiella arvalis dorsobscura garden springtail
Sminthurus multidentatus garden springtail

**Diptera** 

Âgromyzidae

Agromyza fragariae strawberry leafminer
Agromyza spiraeae rose leafminer

Tipulidae

Tipula spp leatherjackets

Hemiptera

Anthocoridae

Orius laevigatus plant bug

Lygaeidae

Euander lacertosus lygaeid bug
Nysius clevelandensis grey cluster bug

Nysius spp. bugs

Nysius vinitor Rutherglen bug

Miridae

Calocoris hobartensis capsid

common green capsid Lygocoris pabulinus Lygus elisus pale legume bug Lygus hesperus tarnished plant bug Lygus lineolaris tarnished plant bug Lygus rugulipennis tarnished plant bug

Plagiognathus arbustorum stink bug Plagiognathus chrysanthemi stink bug Scolopostethus spp. plant bugs

Pentatomidae

Acrosternum hilare green stink bug Dolycoris baccarum stink bug

Pyrrhocoridae

Dindymus versicolor harlequin bug

Homoptera Alevrodidae

> Aleyrodes lonicerae strawberry whitefly

Trialeurodes fernaldi whitefly

Trialeurodes packardi strawberry whitefly

Trialeurodes ruborum whitefly

Aphididae

Acyrthosiphon malvae rogersii strawberry aphid Amphorophora agathonica strawberry aphid Aphis fabae bean aphid

Aphis forbesi strawberry root aphid Aphis gossypii [vector] cotton aphid

Aphis rubifolii raspberry aphid Aulacorthum solani [vector] foxglove aphid Chaetosiphon jacobi strawberry aphid

Chaetosiphon minus lesser strawberry aphid

strawberry aphid Chaetosiphon tetrarhodum [vector] strawberry aphid Chaetosiphon thomasi Fimbriaphis fimbriata rose aphid Fimbriaphis wakibae rose aphid Macrosiphum pelargonii rose aphid Macrosiphum rosae [vector] rose aphid Myzaphis rosarum [vector] lesser rose aphid Myzus ascalonicus [vector] shallot aphid Myzus ornatus [vector] ornate aphid

Myzus persicae [vector] green peach aphid

Rhodobium porosum aphid

Aphrophoridae

Aphrophora alni spittlebug

Aphrophora permutata rhubarb spittlebug

Cercopidae

Cercopis vulnerata red and black froghopper

Emelyanoviana mollicula spittlebug Evacanthus interruptus spittlebug Philaenus leucophthalmus spittlebug

Cicadellidae

Aphrodes bicinctus strawberry leafhopper

Apogonalia grossa leafhopper Coelidia olitoria leafhopper Edwardsiana spp. leafhoppers Empoasca fabae potato leafhopper

Erythroneura elegantula western grape leafhopper

Euscelis spp. leafhoppers Macrosteles spp.leafhoppersScaphytopius acutusleafhopperZygina schneiderileafhopper

Pseudococcidae

Chorizococcus arecae mealybug

Dysmicoccus brevipespineapple mealybugPlanococcus citricitrus mealybugRhizoecus kondonisKondo mealybug

Hymenoptera Tenthredinidae

Allantus calceatus sawfly

Allantus cinctus curled rose sawfly
Cladius pectinicornis antler sawfly

Lepidoptera Gelechiidae

Aristotelia fragariae strawberry crown miner

Compsolechia fragariella western strawberry leafroller

Geometridae

Ascotis selenaria mugwort looper

Hepialidae

Hepialus lupulinus swift moth

Noctuidae

Agrotis spp. (species not in New Zealand)cutwormsAgrotis mundabrown cutwormAgrotis segetumturnip mothAmphipoea interoceanicastrawberry cutworm

Amphipoea interoceanica strawberry cutworm

Helicoverpa punctigera oriental tobacco budworm

Helicoverpa zeabollwormHydraecia interoceanicanoctuid moth

Noctua pronubalarge yellow underwingOrthosia hibiscispeckled green fruitwormPeridroma sauciapearly underwing mothPhlogophora meticulosaangleshades mothSpodoptera exigualesser armywormSpodoptera suniacluster caterpillarXestia c-nigrumspotted cutworm

Psychidae

Hyalarcta huebneri leaf case moth

Pyralidae

Loxostege spp. pyralid moths
Udea rubigalis celery leaftier

Sesiidae

Synanthedon bibionipennis strawberry crown moth

Tortricidae

Acleris comarianastrawberry tortrix mothAncylis comptanastrawberry leafrollerAncylis fragariaestrawberry leafrollerArgyrotaenia citranaorange tortrixCacoecimorpha pronubanacarnation leafrollerChoristoneura lafauryanastrawberry leafrollerChoristoneura rosaceanaoblique-banded leafroller

Claremontia confusa leafroller

Clepsis busckanacyclamen leafrollerClepsis spectranastraw coloured tortrix

Cnephasia asseclana leafroller

Cnephasia longana omnivorous leaftier

Cnephasia stephensiana leaftier

Compsolechia fragariella western strawberry leafroller

Cryptoptila immersana ivy leafroller Epiphyas spp. leafrollers

Lozotaenia forsteranaleafrollerOlethreutes lacunanafruit tree tortrixOlethreutes olivaceanafruit tree tortrixPandemis dumetanafruit tree tortrixPlatynota stultanaomnivorous leafrollerPtycholoma peritanagarden tortrixSparganothis sulfureanablueberry leafroller

Orthoptera Acrididae

Phaulacridium vittatum wingless grasshopper

Gryllotalpidae

Gryllotalpa africana African mole cricket

Gryllotalpa gryllotalpa mole cricket

Scapteriscus acletus southern mole cricket Scapteriscus vicinus tawny mole cricket

Pyrgomorphidae

Atractomorpha crenaticeps grasshopper

Thysanoptera Thripidae

Scirtothrips dorsalis chilli thrips

Scolothrips sexmaculatus

Thrips atratus carnation thrips
Thrips major rose thrips

Mites

Arachnida

Acarina

Diptilomiopidae

Diptacus fragarifoliae false spider mite

Tetranychidae

Tetranychus kanzawaikanzawaii miteTetranychus lobustusstrawberry spider miteTetranychus neocalendonicusMexican spider miteTetranychus pacificusPacific spider mite

Nematodes

Adenophorea

Dorylaimida Longidoridae

Longidorus elongatus [vector] -

Longidorus sylphusneedle nematodeParalongidorus maximusneedle nematodeXiphinema americanum [Vector]dagger nematodeXiphinema chambersidagger nematodeXiphinema diversicaudatum [vector]dagger nematode

Secernentea

**Tylenchida** 

Aphelenchoididae

Aphelenchoides besseyi rice white-tip nematode

Belonolaimidae

Belonolaimus gracilis sting nematode

Criconematidae

Criconemoides curvatum ring nematode
Criconemoides lobatum ring nematode

Dolichodoridae

Tylenchorhynchus claytoni tobacco stunt nematode

Heteroderidae

Heterodera spp. cyst nematode

Hoplolaimidae

Hoplolaimus spp. crown-headed lance nematode

Helicotylenchus microlobusspiral nematodeRotylenchulus buxophilusreniform nematodeRotylenchulus goodeyireniform nematodeScutellonema brachyurusspiral nematode

Paratylenchidae

Paratylenchus macrophallus pin nematode

Pratylenchidae

Pratylenchus brachyurusroot lesion nematodePratylenchus coffeaecoffee root lesion nematodePratylenchus loosiroot lesion nematode

Pratylenchus scribneriScribner's root lesion nematodePratylenchus zeaecorn root lesion nematodeRadopholus similisburrowing nematode

Myriapod Diplopoda Polydesmida Xystodesmidae

Pleuroloma flavipes millipede

Molluscs Gastropoda

Stylommatophora

Helicidae

Trichia striolata strawberry snail

Fungi

Ascomycota

**Dothideales** 

Mycosphaerellaceae

Mycosphaerella louisianae purple leaf spot

**Eurotiales** 

Trichocomaceae

Byssochlamys fulva byssochlamys rot

Hypocreaceae Hypocreaceae

Schizoparme straminea (anamorph Coniella schizoparme fruit rot

castaneicola)

Leotiales Leotiaceae

Discohainesia oenotherae (anamorph Hainesia lythri) leaf spot

**Basidiomycota: Basidiomycetes** 

**Agaricales** 

Tricholomataceae

Armillaria bulbosa armillaria root rot Armillaria mellea (anamorph Rhizomorpha armillaria root rot

subcorticalis)

Armillaria tabescens armillaria root rot

Ceratobasidiales

Ceratobasidiaceae

Ceratobasidium anceps (anamorph Sclerotium leaf rot

deciduum)

Rhizoctonia fragariae black root rot

Chytridiomycota Chytridiales Olpidiaceae

Olpidium brassicae [vector] Black root

**Basidiomycota: Teliomycetes** 

Uredinales Pucciniaceae Phragmidium mexicana

Phragmidium potentiallae leaf rust

Chytridiomycota **Chytridiales** 

Synchytriaceae

Synchytrium fragariae root gall

Mitosporic Fungi (Agonomycetes)

Agonomycetales

**Unknown Agonomycetales** 

Rhizoctonia fragariae fruit and root rot

Mitosporic Fungi (Coelomycetes)

**Sphaeropsidales** Leptostromataceae

Kabatia fragariae leaf spot

Sphaerioidaceae

Coniella fragariae flower spot

Phyllosticta fragaricola phyllosticta leaf spot

Rhabdospora fragariae leaf spot Septoria fragariae septoria spot Septoria fragariaecola septoria spot Stagonospora fragariae stagonospora

**Unknown Coelomycetes** 

**Unknown Coelomycetes** 

Colletotrichum spp. (species not in New Zealand)

Glomerella cingulata (anamorph Colletotrichum strawberry anthracnose

gloeosporioides)

Marssonina canadensis leaf scorch Marssonina pakistanica leaf scorch Marssonina potentillae leaf scorch Pestalotia longisetula leaf spot

Pilidiella quercola schizoparme fruit rot

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales

Dematiaceae

Cercospora fragariae leaf spot

Cercospora vexans cercospora leaf spot

Idriella lunata root rot

Moniliaceae

Ramularia fragariae ramularia leaf spot Verticillium albo-atrum [severe strain] progressive wilt

**Tuberculariales** Tuberculariaceae

> stub wilt Fusarium oxysporum f. sp. fragariae

**Oomycota** 

Peronosporales Peronosporaceae

Peronospora fragariae

downy mildew

**Pythiales Pythiaceae** 

> Pythium debaryanum root rot Pythium dissotocum root rot Pythium hypogynum root rot

Pythium perniciosum root and stem rot

Pythium sylvaticum root rot

Zygomycota: Zygomycetes

Mucorales Mucoraceae

> Mucor recurvus mucor rot

Rhizopus spp.

#### Bacteria

-

Erwinia pyrifoliae

Ralstonia solanacearum (Race 2)

Strawberry marginal chlorosis [ 'Candidatus

phlomobacter fragariae']

Strawberry rickettsia yellows

Xanthomonas arboricola pv. fragariae Xanthomonas fragariae

Xylella fastidiosa\*

moko disease

bacterial leaf blight angular leaf spot Pierce's disease

#### Viruses

٠.

Fragaria chiloensis latent virus [strains not in New

Zealand]

Raspberry ringspot virus Strawberry chlorotic fleck virus

Strawberry cniorotic fieck virus Strawberry latent C 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 bushy stunt virus

Tomato ringspot virus

# Phytoplasmas

٠.

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

-

Strawberry feather leaf disease

Strawberry lethal decline disease

\* For organisms intercepted that are not listed within this pest list refer to the <u>Biosecurity</u> Organisms Register for Imported Commodities to determine regulatory status.

# Inspection, Testing and Treatment Requirements for Fragaria

ORGANISM TYPES	MPI-ACCEPTABLE METHODS
Insects	Visual inspection AND approved insecticide treatments as described in
	the <u>basic conditions</u> of the Import Health Standard Nursery Stock from
	All countries [cuttings only]
Mites	Visual inspection AND approved miticide treatments as described in
	the <u>basic conditions</u> of the Import Health Standard Nursery Stock from
	All countries. [cuttings only] or binocular microscope inspection in
	PEQ [plants in vitro only]
Nematodes	Growing season inspection in PEQ for symptoms of foliar nematodes
Fungi	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes
	upon arrival in the post entry quarantine facility.
	Growing season inspection in PEQ for symptom expression
Bacteria (and diseases caused by	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes
bacteria-like organisms)	upon arrival in the post entry quarantine facility.
Erwinia pyrifoliae	Growing season inspection for symptom expression and PCR
Ralstonia solanacearum (Race 2)	Growing season inspection for symptom expression.
Strawberry marginal chlorosis	Growing season inspection for symptom expression AND PCR
('Candidatus phlomobacter fragariae')	
Strawberry rickettsia yellows	Growing season inspection for symptom expression
Xanthomonas arboricola pv. fragariae	Growing season inspection for symptom expression AND PCR
Xanthomonas fragariae	Growing season inspection for symptom expression AND PCR
Xylella fastidiosa	Growing season inspection in PEQ for disease symptom expression AND PCR
Viruses	
Fragaria chiloensis latent virus	Herbaceous indicators ( <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> )
[strains not in New Zealand]	
Raspberry ringspot virus	Herbaceous indicator (Chenopodium quinoa) AND ELISA or PCR
Strawberry chlorotic fleck virus	Graft inoculation (Fragaria vesca cl. EMB or EMK)
Strawberry latent C virus	Graft inoculation (Fragaria vesca cl. EMC or UC5)
Strawberry latent ringspot virus	Herbaceous indicators (Chenopodium quinoa and Cucumis sativus)
[strains not in New Zealand]	AND ELISA or PCR
Strawberry mild yellow edge-	Graft inoculation (2 indicators; Fragaria vesca cl. UC4 or UC5, or cv.
associated virus	Alpine
Strawberry pallidosis associated virus	Graft inoculation (Fragaria virginiana cl. UC10 or UC11)
Strawberry pseudo mild yellow edge	Graft inoculation (Fragaria vesca cl.UC4 or cv. Alpine. or Fragaria
virus	virginiana cl. UC12)
Strawberry vein banding virus	Graft inoculation (Fragaria vesca cl.UC5 or UC6, or cv. Alpine. or
	Fragaria virginiana cl. UC12) AND PCR
Tobacco necrosis virus [strains not in	Herbaceous indicators (Chenopodium quinoa and Cucumis sativus)
New Zealand]	AND ELISA or PCR
Tobacco streak virus [strains not in	Herbaceous indicators (Chenopodium quinoa
New Zealand]	and Cucumis sativus)  Harbacous indicator (Chananadium quinag)
Tomato bushy stunt virus	Herbaceous indicator (Chenopodium quinoa)
Tomato ringspot virus	Herbaceous indicators ( <i>Chenopodium quinoa</i> and <i>Cucumis sativus</i> ) AND ELISA or PCR
Phytoplasmas	Growing season inspection AND nested PCR or real time PCR
Diseases of unknown aetiology	-
Strawberry feather leaf disease	Graft inoculation (Fragaria vesca cl. UC1 or UC4, or cv. Alpine)
Strawberry lethal decline disease	Graft inoculation (Fragaria vesca cv. Alpine)
,	1

#### Notes:

- 1. The unit for testing is defined in section 2.3.2.1.
- 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 MPI 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 MPI 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 *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 MPI-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 MPI-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 <u>other than</u> 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 *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); Phytophthora ramorum; Xylella

fastidiosa

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

# A. For Whole Plants or Cuttings:

**PEQ**: Level 2

**Minimum Period**: 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- c. Additional declaration:

"Aculops fuchsiae	is not known to occur	' 1n (the count	try or state where the pla	nts 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:

**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
Minim	num 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 2.2.1.11)

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

**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:

**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:

**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.

**PEO:** None

**Cleanliness:** Bulbs (corms) must be free of leafy coverings.

**Additional Declaration(s):** 

# 1) For bulbs produced under a MPI-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 bulb certification scheme."

OR

# 2) For bulbs NOT produced under a MPI-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:**

**PEO:** Level 1

**Minimum Period:** 3 months

Cleanliness: Bulbs (corms) must be free of leafy coverings.

C. For Dormant Bulbs from Countries <u>other than</u> 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:

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 Cou	intries: All			
Quarantine Po	ests Uromyces spp.			
Entry Conditi	ons: Basic; with variations and additional conditions as specified below:			
A. For Wl	nole Plants:			
PEQ: Level 2				
Minimum Per	iod: 3 months			
Additional De	claration:			
"Uromyces spp grown)". <b>OR</b>	. are not known to occur on Glycyrrhiza in (the country or state where the plants were			
"The plants we	re inspected during the growing season and no <i>Uromyces</i> spp. were detected".			
R For Tissue	Cultures			

**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:**

**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 *Hebe*", and are additional to those specified in sections 1, 2 and 3 of the import health standard.

# **GENERAL CONDITIONS:**

**Approved Countries:** All

**Quarantine Pests:** Phellinus noxius; 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 2.2.1.12) **Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- b. Conditions for Phellinus noxius (section 2.2.1.13)

**Note**: Only applies to members of the *Albizia* and *Cassia* genera AND the following species: *Celtis sinensis*, *Grevillea robusta*, *Hibiscus rosa-sinensis*, *Hibiscus schizopetalus*, *Hibiscus tiliaceus*, *Ilex rotunda*, *Lagerstroemia speciose*, *Lagerstroemia subcostata*, *Ligustrum japonicum*, *Liquidambar formosana* and *Pistacia chinensis* 

# **B. For Cuttings:**

**PEQ**: Level 2

**Minimum Period:** 3 months

a. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa* 

#### C. For Tissue Cultures:

**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; Xylella fastidiosa

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

**For Dormant Tubers Only:** 

**PEO**: Level 2

**Minimum Period**: 3 months **Additional Declaration(s)**:

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
   Guidance for importers: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- b. Conditions for Phymatotrichopsis omnivora

**OPTION 1:** Additional declaration "The dormant bulbs have been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*".

#### OR

# **OPTION 2:**

(i) Additional declaration: "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.

**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) <u>Documentation</u>

**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 for Primary Industries (MPI) 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**

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 and phytoplasmas."

# (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 for Primary Industries (MPI) have been undertaken.

The *Hippeastrum* dormant bulbs have been:

- produced in accordance with the requirements of the BKD Class 1 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 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 Class 1 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 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 for Primary Industries (MPI) 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.

**PEO**: 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 coffeaecoffee root lesion nematodePratylenchus scribneriScribner's root lesion nematode

**Fungus** 

**Basidiomycota: Basidiomycetes** 

Agaricales

Tricholomataceae

Armillaria mellea (anamorph Rhizomorpha subcorticalis)

armillaria root rot

**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 alboatrum; Xylella fastidiosa

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

For Whole Plants: **PEO**: Level 3

**Minimum Period**: 3 months

a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
 Guidance for importers: The minimum quarantine period will be 6 months for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*

**For Plants in 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 *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; Phellinus noxius; Xylella fastidiosa

# **Entry Conditions:**

Basic; with variations and additional conditions as specified below:

#### A. For Whole Plants:

**PEO**: Level 2

**Minimum Period**: 3 months

a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

**Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa* 

b. Conditions for *Phellinus noxius* (section 2.2.1.13)

Note: Only applies to the following species: Hydrangea chinensis and Morus alba

c. 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 Cuttings:**

**PEQ**: Level 2

**Minimum Period**: 3 months

- Conditions for *Xylella fastidiosa* (section 2.2.1.12)
   Guidance for importers: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*
- b. Additional declaration:

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

# **C. For Tissue Cultures:**

# 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 2.2.1.12)

**Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa* 

# **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 for Primary Industries (MPI) 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 MPI Inspector.

### 3.2 Iris whole plants and dormant bulbs from the Netherlands

# (i) <u>Documentation</u>

**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 for Primary Industries (MPI) 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 for Primary Industries (MPI) 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

bulb scale mite Steneotarsonemus laticeps

Nematode

Secernentea

**Tylenchida** 

Criconematidae

Tarsonemidae

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** 

**Agaricales** 

Tricholomataceae

Armillaria mellea (anamorph Rhizomorpha armillaria root rot

subcorticalis)

Lachnocladiales

Lachnocladiaceae

Scytinostroma eurasiaticogalactinum white root rot

**Phallales** 

Hysterangiaceae

Hysterangium boudieri --

mitosporic fungi (Agonomycetes)

Agonomycetales

unknown Agonomycetales

Rhizoctonia tuliparum basal rot Sclerotium rolfsii var. delphinii sclerotium rot

**Bacterium** 

Pseudomonadaceae

Burkholderia gladioli pv. gladioli bacterial rot

Virus

Broad bean wilt virus Iris fulva mosaic virus Iris germanica leaf stripe virus Japanese iris necrotic ring virus -

Tobacco rattle virus [strains not in New Zealand]

**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: Ceratocystis fimbriata; 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 *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Juglans* genus

b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

**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; Xylella fastidiosa

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

For Whole Plants: **PEQ**: Level 3

**Minimum Period:** 6 months

a. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note:** Only applies to the members of the *Juniperus* genus

**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 an	id <i>Microsphaeri</i>	ia spp. are not l	known to occur i	in	(the country or
		**				
state of wl	nere 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.

**PEO:** 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) <u>Documentation</u>

**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 for Primary Industries (MPI) 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

**PEO**: 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 MPI 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 for Primary Industries (MPI) have been undertaken.

#### The *Lilium* 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

- 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 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) <u>Post-entry quarantine</u>

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 for Primary Industries (MPI) 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 armillaria root rot

subcorticalis)
Auriculariales

Auriculariaceae

Helicobasidium mompa violet root rot

**Basidiomycota: Teliomycetes** 

Uredinales Pucciniaceae

> Puccinia sporoboli (anamorph Aecidium lilii) Rust Uromyces aecidiiformis rust fungi

Uromyces holwayi mitosporic fungi (Agonomycetes) Agonomycetales unknown Agonomycetales Rhizoctonia tuliparum basal rot Sclerotium rolfsii var. delphinii sclerotium rot Sclerotium wakkeri Blackleg mitosporic fungi (Coelomycetes) **Sphaeropsidales** Sphaerioidaceae Macrophoma lilii black root rot Phyllosticta liliicola black rot unknown Coelomycetes unknown Coelomycetes Colletotrichum lilii mitosporic fungi (Hyphomycetes) Hyphomycetales Moniliaceae hyacinth blight Botrytis hyacinthi Ramularia vallisumbrosae white mould **Tuberculariales** Tuberculariaceae Fusarium oxysporum f. sp. lilii basal rot unknown Hyphomycetes unknown Hyphomycetes Aureobasidium microstictum **Bacterium** Enterobacteriaceae Erwinia lilii Virus Apple stem grooving virus [strains not in New Zealand] Lily rosette virus Tobacco rattle virus [strains not in New Zealand]

Tomato ringspot 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 *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 2.2.1.11)

#### **OPTION 2:**

**PEO:** 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 MPI-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; Phellinus noxius; Xyloryctidae (Lepidoptera)

**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 *Phellinus noxius* (section 2.2.1.13)

b. 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

**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 *Malus*", and are additional to those specified in sections 1, 2 and 3 of the import health standard.

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

Cuttings (dormant); plants in tissue culture

*Malus* can be imported into Level 2 post entry quarantine from MPI-accredited facilities, or into Level 3 post entry quarantine from non-accredited facilities.

#### 2. Pests of Malus

Refer to the pest list.

#### 3. Entry conditions for:

## 3.1 *Malus* cuttings and tissue culture from offshore MPI-accredited facilities in any country

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Malus*, the accredited facility operator must also have an agreement with MPI on the phytosanitary measures to be undertaken for *Malus*. Refer to the "Inspection, Testing and Treatment Requirements for *Malus*".

#### (i) Documentation

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Malus* 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 MPI have been undertaken.

The *Malus* 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 MPI and the [name of the MPI-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 *Malus* 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 MPI and the [name of the MPI-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 *Malus* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to the 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 (active continuous growth) in postentry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. For tissue cultures, the quarantine period begins when tissue cultures are deflasked into the PEQ greenhouse. 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 Malus cuttings and tissue culture from non-accredited facilities in any country

#### (i) <u>Documentation</u>

**Phytosanitary certificate:** a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Malus* 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 MPI have been undertaken.

The *Malus* 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 *Malus* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to the 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 36 months in post-entry quarantine. For tissue cultures, the quarantine period begins when tissue cultures are deflasked into the PEQ greenhouse. 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 *Malus*", 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 Malus**

\*For organisms intercepted that are not listed within this pest list refer to the <u>Biosecurity</u> <u>Organisms Register for Imported Commodities</u> to determine the regulatory status.

#### **REGULATED PESTS (actionable)**

Insecta

Coleoptera

Attelabidae

Rhynchites caeruleus apple twig cutter

Bostrichidae

Amphicerus bicaudatus apple twig borer
Apate monachus black borer

Buprestidae

Agrilus mali apple wood borer Agrilus spp. bark borers

Chrysobothris femorataflatheaded apple tree borerChrysobothris maliPacific flatheaded borerChrysobothris spp.flat-headed borers

Sphenoptera lafertei flatheaded peach tree borer

Cerambycidae

Aeolesthes sarta Quetta borer

Apriona germarii mulberry longicorn beetle

Apriona japonica mulberry borer Bacchisa fortunei pear borer

Batocera rufomaculata red-spotted longhorn beetle

Phryneta spinator

Curculionidae

Anthonomus piri apple bud weevil
Eremnus atratus black weevil

Eremnus cerealis western province grain worm

Eremnus setulosus grey weevil

Scolvtidae

Hypothenemus obscurusapple twig borerScolytus japonicusJapanese bark beetleScolytus rugulosusfruit bark borer

Diptera

Cecidomviidae

Resseliella oculiperda red bud borer Thomasiniana oculiperda red bud borer

Hormptera Aphididae

Aphis spiraecola spiraea aphid

Diaspididae

Chrysomphalus aonidumFlorida red scaleChrysomphalus dictyospermiSpanish red scaleDiaspidiotus africanusgrey scale

Lepidoptera Cossidae

Coryphodema tristis quince trunk borer

Gelechiidae

Recurvaria syrictis bud moth

Gracillariidae

Marmara elotellaapple barkminerMarmara pomonellaapple fruitminer

Oecophoridae

Cryptophasa melanostigma fruit tree borer

Pyralidae

Euzophera semifuneralis American plum borer Ostrinia nubilalis European corn borer Sesiidae Thamnosphecia pyri apple bark borer Synanthedon scitula pecan tree borer

Acarina

Mite Arachnid

a

Eriophyidae

Aculops malus eriophyid mite Eriophyes mali Willamette spider mite eriophyid mite Phyllocoptes mali Cenopalpus chitraliensis bryobia mite Cenopalpus haqii banana mite

Cenopalpus orakiensis Bailey's apple rust mite

Cenopalpus pulcher flat scarlet mite

Tenuipalpidae

Brevipalpus lilium false spider mite Brevipalpus obovatus privet mite Pacific mite Tenuipalpus taonicus Rhinotergum schestovici mite

Tetranychidae

Eotetranychus carpini false spider mite Eotetranychus uncatus Lewis spider mite Eotetranychus willamettei hazel mite Oligonychus gossypii tetranychid mite Oligonychus newcomeri spider mite Oligonychus yothersi avocado red mite Tetranychus canadensis four spotted spider mite Tetranychus kanzawai Kanzawa spider mite Tetranychus mcdanieli McDaniel spider mite Tetranychus schoenei Schoenei spider mite Amphitetranychus viennensis hawthorn spider mite

Tydeidae

Tydeus spp. tydeid mites

**Fungus** 

**Ascomycota: Ascomycetes** 

**Diaporthales** Valsaceae

> Diaporthe tanakae (anamorph Phomopsis tanakae) pear canker Leucostoma auerswaldii leucostoma canker

**Diatrypales** Diatrypaceae

Eutypella sorbi stem disease

**Dothideales** 

Mycosphaerellaceae

Mycosphaerella pyri (anamorph Septoria pyricola) leaf fleck of pear

Mycosphaerella tulasnei rot

Schizothyriaceae

Schizothyrium perexiguum greasy blotch

**Erysiphales Ervsiphaceae** 

> Pleochaeta mali powdery mildew

Heotiales

Dermateaceae

Diplocarpon mali black spot Pezicula perennans perennial canker

Sclerotiniaceae

Grovesinia pyramidalis (anamorph Cristulariella moricola) target spot Monilinia laxa f. sp. mali brown rot

Monilinia mali monilinia leaf blight Monilinia fructigena (anamorph Monilia fructigena) European brown rot

Sclerotinia spp. neck rot

**Rhytismatales** 

Cryptomycetaceae

Potebniamyces pyri (anamorph Phacidiopycnis piri) Phacidiopycnis rot

**Sordariales** 

Chaetomiaceae

Chaetomium spp. fruit rot

**Taphrinales** 

**Taphrinaceae** 

Taphrina bullata leaf blister

**Xylariales** 

Xvlariaceae

Biscogniauxia marginatanailhead cankerDaldinia vernicosawood rotXylaria maliblack root rot

**Ascomycota: Saccharomycetes** 

Saccharomycetales Endomycetaceae

Endomycopsis mali rot

**Basidiomycota: Basidiomycetes** 

**Agaricales** 

Coprinaceae

Coprinus psychromorbidus coprinus rot

Tricholomataceae

Armillaria melleaarmillaria root rotArmillaria ostoyaearmillaria root rotArmillaria tabescensarmillaria root rot

Ceratobasidiales

Ceratobasidiaceae

Ceratobasidium stevensii thread blight

Ganodermatales

Ganodermataceae

Ganoderma lucidum wood rot

Hymenochaetales

Hymenochaetaceae

Phellinus pomaceus white heart rot

Lachnocladiales

Lachnocladiaceae

Scytinostroma galactinum white root rot

**Polyporales** 

Corticiaceae

Corticium koleroga thread blight

Cyphellaceae

Maireina marginata wood decay

Meripilaceae

Phlebia radiatawood decayTrametes ochraceawood decay

**Poriales** 

Coriolaceae

Ceriporia spissawood rotCoriolopsis gallicawhite rotFomes fomentariuswood decayFomitopsis pinicolabrown cubical rot

Laetiporus sulphureus (anamorph Sporotrichum

versisporum)brown cubical rotLenzites betulinawood decayOxyporus latemarginatuswood decayOxyporus similiswood decay

Stereales

Atheliaceae

Butlerelfia eustacei storage rot

Sistotremataceae

Phymatotrichopsis omnivorum Texas root rot

**Basidiomycota: Urediniomycetes** 

**Uredinales** 

Pucciniaceae

Gymnosporangium clavipes quince rust

Gymnosporangium cornutum rust

Gymnosporangium fuscumEuropean pear rustGymnosporangium globosumAmerican hawthorn rust

Gymnosporangium hemisphaericum rust

Gymnosporangium libocedriPacific Coast pear rustGymnosporangium nelsoniiRocky Mountain pear rust

Gymnosporangium nidus-avis rust

Gymnosporangium nootkatense yellow cypress rust

Gymnosporangium shiraianum rust

Gymnosporangium spp. cedar apple rust

Gymnosporangium tremelloidescommon juniper gall rustGymnosporangium yamadaeJapanese apple rustGymnosporangium juniperi-virginianaecedar apple rust

**Unknown Uredinales** 

Roestelia fenzeliana rust Roestelia levis rust

**Basidiomycota: Ustomycetes** 

Platygloeales Platygloeaceae

Helicobasidium mompa violet root rot

Mitosporic Fungi (Coelomycetes)

Sphaeropsidales Sphaerioidaceae

Cytospora schulzeribark diseaseDothiorella malifruit rotPhomopsis truncicolablightPhyllosticta solitariaapple blotchPhyllosticta spp.leaf spotPyrenochaeta malifruit rot

Sphaeropsis pyriputrescens Sphaeropsis rot

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales Dematiaceae

Alternaria mali alternaria blotch

Alternaria spp.

Helminthosporium papulosumblack poxCladosporium spp.mouldy coreEpicoccum spp.mouldy core

Stemphylium spp.

Ulocladium spp. cladosporium rot

Moniliaceae

Aspergillus spp. coloured moulds

Botrytis malifruit rotCephalosporium carpogenumfruit rot

Cephalosporium spp.

Penicillium spp. rot

Ramularia macrospora bellflower leaf spot Verticillium spp. verticillium wilt

**Tuberculariales** 

Tuberculariaceae

Fusarium spp.

**Unknown Hyphomycetes** 

Oidium spp. powdery mildew

Bacterium

**Schizomycetes** 

#### **Pseudomonadales**

Pseudomonadaceae Pseudomonas syringae pv. papulans blister spot Virus Cherry rasp leaf virus Clover yellow mosaic virus Tomato bushy stunt virus Tomato ringspot virus Viroi d Apple dimple fruit viroid Apple fruit crinkle viroid Apple scar skin viroid Phytoplasma 'Candidatus Phytoplasma asteris' Apple sessile leaf phytoplasma Apple proliferation 'Candidatus Phytoplasma mali' phytoplasma Disease of unknown etiology Apple blister bark agent Apple brown ringspot agent Apple bumpy fruit agent Apple bunchy top agent Apple dead spur agent Apple decline Apple freckle scurf agent Apple green dimple and ring blotch agent Apple junction necrotic pitting agent Apple McIntosh depression agent

> Apple star crack agent Apple transmissible internal bark necrosis agent

Apple narrow leaf agent Apple Newton wrinkle agent Apple pustule canker agent Apple red ring agent Apple rosette agent Apple rough skin agent Apple russet wart agent

## Inspection, Testing and Treatment Requirements for Malus

ORGANISM TYPES	MPI-ACCEPTABLE METHODS
Insects	Visual inspection <b>AND</b> approved insecticide treatments as described in section 2.2.1.6 of the Basic conditions [cuttings only]
Mites	Visual inspection <b>AND</b> approved miticide treatments as described in the section 2.2.1.6 of the Basic conditions [cuttings only] <b>or</b> binocular microscope inspection in PEQ [plants in tissue culture only]
Fungi	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes upon arrival in the post entry quarantine facility.  Growing season inspection in PEQ for symptom expression
Bacteria	
Pseudomonas syringae pv. papulans	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes upon arrival in the post entry quarantine facility.  Growing season inspection for symptom expression <b>AND</b> PCR
Viruses	
Cherry rasp leaf virus	Woody indexing ('Golden delicious') <b>or</b> herbaceous indexing ( <i>Chenopodium quinoa</i> and <i>Chenopodium amaranticolor</i> ) <b>AND</b> PCR
Clover yellow mosaic virus	Growing season inspection
Tomato bushy stunt virus	Herbaceous indexing (Chenopodium quinoa and Chenopodium amaranticolor)
Tomato ringspot virus	Herbaceous indexing ( <i>Chenopodium quinoa</i> and <i>Chenopodium amaranticolor</i> ) <b>AND</b> ELISA <b>or</b> PCR
Viroids	
Apple dimple fruit viroid	Woody indexing ('Red delicious') <b>AND</b> PCR
Apple fruit crinkle viroid	Woody indexing ('Golden delicious') AND PCR
Apple scar skin viroid	Woody indexing ('Golden delicious' and 'Red delicious') <b>AND</b> PCR
Phytoplasmas	
'Candidatus Phytoplasma asteris'	Nested PCR or real time PCR using universal phytoplasma primers
(Apple sessile leaf phytoplasma)	
'Candidatus Phytoplasma mali'	Woody indexing ('Golden delicious') AND nested PCR or real
(Apple proliferation phytoplasma)	time PCR using universal phytoplasma primers
Diseases of unknown etiology	
Apple blister bark agent	Growing season inspection
Apple brown ringspot agent	Growing season inspection
Apple bumpy fruit agent	Growing season inspection
Apple bunchy top agent	Growing season inspection
Apple dead spur agent	Woody indexing ('Golden delicious' and 'Red delicious')
Apple decline	Growing season inspection
Apple freckle scurf agent	Growing season inspection
Apple green dimple and ring blotch agent	Growing season inspection
Apple junction necrotic pitting agent	Growing season inspection
Apple McIntosh depression agent	Growing season inspection
Apple narrow leaf agent	Growing season inspection
Apple Newton wrinkle agent	Growing season inspection
Apple pustule canker agent	Growing season inspection
Apple red ring agent	Growing season inspection
Apple rosette agent	Growing season inspection
Apple rough skin agent	Woody indexing ('Golden delicious')
Apple russet wart agent	Woody indexing ('Golden delicious')
Apple star crack agent	Woody indexing ('Golden delicious' and 'Red delicious')
Apple transmissible internal bark necrosis agent	Growing season inspection

#### **Notes:**

- 1. Pest free area or Pest free place of production endorsements for regulated viruses, viroids, phytoplasmas, and diseases of unknown etiology must be assessed by MPI prior to permit issue. The exporting NPPO must endorse additional declarations on the phytosanitary certificate, to be considered equivalent to testing in post entry quarantine.
- **2.** The **unit for testing** is definied in section 2.3.2.1.
- **3. Tissue culture plantlets** must be deflasked and grown in a post entry quarantine 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. Woody indexing relies on the development of fruit and bark symptoms on susceptible *Malus* cultivars which would only be expressed under field conditions (ie. Level 1 post entry quarantine [PEQ]). Negative and positive control plants must be included; the positive control must develop the expected symptoms (eg. Apple green crinkle [non-regulated]). Indicator plants must be observed for at least two fruit crops whilst the plants are in Level 1 PEQ. All nursery stock plants must remain in Level 3 post entry quarantine for the completion of woody indicator testing.
  - **Option 1:** Woody indexing may be initiated in Level 1 PEQ after all the herbaceous indexing, molecular, and serological tests have been completed.
  - **Option 2:** Woody indexing may be initiated in Level 3 PEQ when the nursery stock arrives in New Zealand and transferred to Level 1 PEQ as soon as the herbaceous indexing, molecular, and serological tests have been completed. In this case, woody indicator plants must be held under appropriate environmental conditions (day time temperatures of 22-25 °C and night time temperatures of 12-18 °C) in a separate unit within the facility that does not contain any other plant material.
- **8. Testing protocols** for tests completed in New Zealand are described in the Malus (Apple) Post-Entry Quarantine Testing Manual, which can be viewed on the website:

  http://www.biosecurity.govt.nz/files/regs/imports/plants/high-value-crops/malus-testing-manual.pdf
- **9. Inspection** of the *Malus* plants by the operator of the PEQ facility for signs of pest and disease must be at least twice per week for the first three months of active growth, and during spring and autumn. All other times of active growth (summer), plants should be inspected once per week. A record of inspections carried out by the Operator is to be kept and made available to the MPI Inspector on request.
- 10. Other internationally recognised testing methods may be accepted by MPI 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 *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**: Ceratocystis fimbriata, Phellinus noxius; Xanthomonas campestris pv.

mangiferae-indicae

**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 *Ceratocystis fimbriata* (section 2.2.1.8)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13)

Note: Only applies to the following species: Mangifera indica

c. 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".

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

**PEQ**: Level 2

Minimum Period: 6 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8)
- b. Additional declaration:

"Xanthomonas campestris pv. mangiferae-indicae is not known to occur in
and the state of t
(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".

**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**: Ceratocystis fimbriata; Phellinus noxius; Puccinia psidii sensu lato (s.l.) complex (including Uredo rangelii); Xylella fastidiosa

#### **Entry Conditions:**

Basic; with variations and additional conditions as specified below:

#### A. For Whole Plants:

### OPTION 1:

PEQ: Level 2

**Minimum Period**: 6 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Metrosideros* and *Pimenta* genera
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note:** Only applies to members of the *Metrosideros* and *Myrtus* genera
- c. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note:** Only applies to the following species: *Melaleuca leucadendra*
- d. Additional declaration:

" *Puccinia psidii* s.l. complex (including *Uredo rangelii*) is not known to occur in (the country of origin)".

#### **OPTION 2:**

**PEQ**: Level 3

**Minimum Period**: 6 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Metrosideros* and *Pimenta* genera
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note:** Only applies to members of the *Metrosideros* genus

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

**PEQ**: Level 3

Minimum Period: 6 months

**OPTION 1:** 

a. Additional declaration:

"Puccinia psidii s.l. complex (including Uredo rangelii) is not known to occur in (the country of origin)".

OR

"The tissue cultures in this consignment have been actively growing in the culture container for at least four weeks at temperatures between 15 – 23°C (59 – 73.4°F)".

#### **OPTION 2:**

PEQ: Level 2 Tissue culture laboratory

Minimum Period: 4 weeks

a. The cultures containers are not to be opened during the quarantine period.

**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 MPI 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 hypochorite and sterile water, or MPI 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 <a href="http://www.maf.govt.nz/biosecurity/pests-diseases/registers-lists/boric/">http://www.maf.govt.nz/biosecurity/pests-diseases/registers-lists/boric/</a> to ascertain regulated status. If the organism is not identified or categorised within the register, please contact <a href="mailto:plantimports@mpi.govt.nz">plantimports@mpi.govt.nz</a>.

#### (v) <u>Post-entry quarantine</u>

**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. Subculturing is not to be undertaken during the PEQ period without prior approval from MPI. 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**

Acidovorax avenae ssp. avenae Bacterial leaf blight

Leifsonia xyli subsp. Xyli Sugarcane ratoon stunting disease

**Fungi** 

Acremonium sp. Black bundle disease

Colletotrichum sp.Leaf spotDiaporthe sp.CankerDiplodia sp.BlightDrechslera giganteanEyespotFusarium miscanthiRotFusarium pallidoroseumRotGlomerella sp.Leaf spot

Glomerella tucumanensisLeaf spotHelminthosporium sp.EyespotLeptosphaeria sp.CankerMagnaporthe salviniiStem rotMycosphaerella recutitaLeaf blightMycosphaerella striatiformansLeaf spotNigrospora sp.Stalk rotParcellana kombaiYellow spot

Passalora koepkei
Peronosclerospora sp.
Phlyctema sp.
Phoma sp.
Phomopsis sp.
Blight
Phomopsis sp.
Blight

Phomopsis sp.BlightPhyllachora sp.Leaf spotPuccinia melanocephalaSugarcane rustRamularia sp.AnthracnoseRhizoctonia sp.Root rotStagonospora sp.ScorchThanatephorus cucumerisBlight

Ustilago scitamineaSugarcane smutVerticillium sp.Verticillium wilt

Mites

Schizotetranychus celarius Bamboo mite

Viruses

Miscanthus streak virus Sugarcane mosaic virus

#### 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	MPI ACCEPTABLE MEASURES
Fungi	
Ustilago scitaminea	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.
Bacteria	
Leifsonia xyli subsp. xyli	PCR/BIO-PCR, <b>OR</b> fluorescent-antibody staining of sap extracts, concentrated on membrane filters by filtration with observation by epifluorescence microscopy.
Viruses	
Miscanthus streak virus	PCR
Sugarcane mosaic virus	PCR or ELISA

#### **Notes:**

- **1. Unit for testing:** The unit for testing is defined in section 2.3.2.1.
- 2. Sample size for testing: Sample size required for testing will be determined by MPI 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 MPI.
- **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 MPI.
- **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 MPI 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:

**PEO**: 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 MPI-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; Phellinus noxius; 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:

**PEO:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
   Guidance for importers: The minimum quarantine period will be 6 months for nursery stock sourced from countries not recognised by MPI as free from *Xylella fastidiosa*
- b. Conditions for *Phellinus noxius* (section 2.2.1.13)
- c. Additional declaration:

"Alternanthera	mosaic virus	and	Plantago	asiatica	mosaic	virus	are no	t known	ı to
occur in	(the country or	state	where the p	lants were	grown)		".		

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

**PEO:** Level 2

**Minimum Period:** 3 months

a. 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 lilii;

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 MPI-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 bulb certification scheme."

OR

#### 2) For bulbs NOT produced under a MPI-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: PEO:** Level 1

**Minimum Period:** 3 months

C. For Dormant Bulbs from Countries <u>other than</u> 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 MPI 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) <u>Post-entry quarantine</u>

**PEQ**: All *Olea* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to the 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)**

Insecta Insecta

Coccidae

Saissetia privigna black scale

Coleoptera

Attelabidae

Rhynchites cribripennis twig cutter

Buprestidae

Anthaxia ariadna wood-boring beetle

**Scolytidae** 

Hylesinus fraxinibark beetleHylesinus oleiperdabark beetleHylesinus toraniobark beetlePhloeotribus oleaebark beetlePhloeotribus scarabaeiodesbark beetleXylosandrus compactusblack twig borer

Diptera

Cecidomyiidae

Thomasiniana sp. olive bark midge

Asterolecaniidae

Pollinia pollini globe shaped olive scale

Coccidae

Ceroplastes ruscifig wax scaleLichtensia viburniscaleMetaceronema japonicascale insect

Diaspididae

Aonidomytilus espinosaiscaleHemiberlesia palmaepalm scaleLeucaspis riccaescaleLindingaspis ferrisiscaleParlatoria oleaeolive scalePseudaulacaspis pentagonawhite peach scaleSelenaspidus articulatusWest Indian red scale

Lepidoptera

**Pyralidae** 

Euzophera pinguis bark borer

Mite

Arachnida

Acarina

Eriophyidae

Aceria creticamiteAceria oleaeolive mite

Aculops benakii olive yellow spot mite

Aculus oleariusolive miteDitrymacus athiasellusolive miteEriophyes oleaeolive bud miteEriophyes oliviolive mite

Oxycenus maxwelliolive leaf and flower miteOxycenus niloticusolive leaf and flower miteOxycenus noloticusolive leaf and flower mite

Tegonotus hassani olive rust mite

Tenuipalpidae

Brevipalpus chalkidicusfalse spider miteBrevipalpus macedonicusfalse spider miteBrevipalpus oleaefalse spider mite

Brevipalpus oleariusfalse spider miteBrevipalpus olivicolafalse spider miteRaoiella macfarlaneifalse spider miteTenuipalpus caudatusfalse spider mite

Tetranychidae

Eotetranychus lewisi big beaked plum mite

**Fungus** 

Ascomycota

**Dothideales** 

Capnodiaceae

Capnodium elaeophilum sooty mould

Elsinoaceae

Elsinoe oleae olive scab

**Unknown Dothideales** 

Massariella oleaebark cankerMassariella zambettakianacankerZukalia purpureablack mildew

Xylariales Xylariaceae

Xylaria sicula root rot

Basidiomycota Agaricales

Agaricaceae

Armillaria mellea (anamorph Rhizomorpha subcorticalis) armillaria root rot

Boletales Paxillaceae

Omphalotus olearius wood rot

Ganodermatales Ganodermataceae

Ganoderma lucidum (anamorph Polyporus lucidus) wood rot

Hymenochaetaceae

Phellinus igniarius wood rot

Oomycota Pythiaceae Pythaceae

Phytophthora ramorum Sudden oak death disease

**Poriales** 

Coriolaceae

Fomes fomentarius Fomes fulvus Fomes salicinus Fomes torulosus

Fomes torulosus wood rot
Fomes yucatonensis wood rot

Polyporaceae

Polyporus biennis wood rot
Polyporus oleae wood rot

**Stereales** 

Sistotremataceae

Trechispora brinkmanii (anamorph Phymatotrichopsis Texas root rot

omnivorum)

Mitosporic Fungi (Coelomycetes)

Sphaeropsidales Sphaerioidaceae

Camarosporium dalmaticabrown spotCytospora oleinacankerMacrophoma dalmaticafruit rotPhoma incomptastem blight

Phyllosticta oleae phyllosticta leaf spot

Septoria obesa leaf spot Septoria oleae leaf spot

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Septoria oleagina leaf spot Septoria serpentaria leaf spot Sphaeropsis dalmatica stem gall Sphaeropsis oleae stem gall **Unknown Coelomycetes Unknown Coelomycetes** Cylindrosporium olivae leaf spot **Bacterium** Pseudomonadaceae

Pseudomonas syringae pv. garcae twig blight Xylella fastidiosa

Virus

Cherry leaf roll virus [strains not in New Zealand] Olive latent 1 virus Olive latent 2 virus Olive latent ringspot virus Olive leaf yellowing-associated virus Olive vein yellow virus Strawberry latent ringspot virus [strains not in New Zealand]

**Phytoplasma** 

Olive witches' broom phytoplasma

Disease of unknown aetiology

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	MPI-ACCEPTED METHODS (See notes below)
Insects	Visual inspection AND approved insecticide treatments (Refer to section
	2.2.1.6 of the basic conditions) [cuttings only].
Mites	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].
Fungi	Growing season inspection in PEQ for disease symptom expression.
Bacterium	
Pseudomonas syringae pv. garcae	Growing season inspection in PEQ for disease symptom expression.
Xylella fastidiosa	Growing season inspection in PEQ for disease symptom expression
	AND PCR
Virus	
Cherry leaf roll virus [strains not	ELISA or PCR AND herbaceous indicators Ca, Cq and Nb.
in New Zealand]	
Olive latent 1 virus	Herbaceous indicators Ca, Cq and Nb.
Olive latent 2 virus	Herbaceous indicators Ca, Cq and Nb.
Olive latent ringspot virus	Herbaceous indicators Ca and Cq.
Olive leaf yellowing-associated	Woody indicators (Olea europaea cv. Biancolilla)
virus	
Olive vein yellow virus	Herbaceous indicators Cq
Strawberry latent ringspot virus	ELISA or PCR AND herbaceous indicators Ca and Cq.
[strains not in New Zealand]	•
Phytoplasmas	Woody indicators AND nested PCR or real time PCR using universal
	phytoplasma primers.
Diseases of unknown aetiology	Growing season inspection in PEQ for disease symptom expression.

#### **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. 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.
- 3. 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); Polymerase chain reaction (PCR).
- 5. 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.
- 6. PCR and ELISA must be validated using positive controls/reference material prior to use in quarantine testing.
- 7. Positive and negative controls must be used in ELISA tests.
- 8. 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.
- 9. 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.
- 10. With prior notification, MPI will accept other internationally recognised testing methods.

# 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 flaccidium; 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 flaccidium*".
- **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 flaccidium 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 sonniferum*", 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

**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:**

**PEO**: 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 MPI 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) <u>Post-entry quarantine</u>

**PEQ**: All *Persea* nursery stock must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to the 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)**

•			
	nc	•	nt.
	ns	C	LL

#### 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 Pseudotheraptus wayi

coreid bug

Lygaeidae

Nysius ericae false chinch bug

Tingidae

Pseudacysta perseae avocado lace bug

Homoptera

Alevrodidae

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

oriental yellow scale Aonidiella orientalis coconut scale Aspidiotus destructor 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

Seychelles scale Icerya seychellarum

Pseudococcidae

Dysmicoccus brevipes pineapple mealybug striped mealybug Ferrisia virgata Nipaecoccus nipae coconut mealybug Planococcus citri citrus mealybug

**Psyllidae** 

Trioza aguacate psyllid Trioza anceps psyllid Trioza godoyae psyllid Trioza perseae psyllid

Hymenoptera Formicidae

Atta cephalotes leaf-cutting ant

Lepidoptera

Geometridae

Ascotis selenaria mugwort looper Sabulodes aegrotata mugwort looper

Hesperiidae

Pyrrhopyge chalybea swift moth

Noctuidae

Peridroma margaritosa -Prodenia eridania -

Pseudoplusia includens soybean looper

Oecophoridae

Stenoma catenifer stenomid moth

Pyralidae

Cryptoblabes gnidiella Christmas berry webworm

Stericta albifasciata -

Tortricidae

Amorbia cuneana leafroller

Amorbia emigratella Mexican leafroller

Amorbia essiganaleafrollerArgyrotaenia citranaorange tortrixCacoecimorpha pronubanacarnation leafrollerCryptophlebia leucotretafalse codling mothHomona spargotisavocado leafrollerIsotenes miseranaorange fruitborerPlatynota stultanaomnivorous leafroller

Thysanoptera Thripidae

Retithrips syriacus black vine thrips Selenothrips rubrocinctus red-banded thrips

Mite

Arachnida

Acarina

Tetranychidae

Oligonychus coffeae tea red spider mite
Oligonychus perseae spider mite

Oligonychus punicae avocado brown mite
Oligonychus yothersi avocado red mite

**Fungus** 

Ascomycota

**Phyllachorales** 

Phyllachoraceae

Glomerella cingulata var. minor (anamorph anthracnose

Colletotrichum gloeosporioides var. minus)

Xylariales

Xylariaceae

Rosellinia bunodes - Rosellinia pepo -

Basidiomycota

Hymenochaetales

Hymenochaetaceae

Phellinus noxius brown root rot

Oomycota

**Pythiales** 

Pythiaceae

Phytophthora palmivora black rot

**Dothideomycetes** 

Myriangiales

Elsinoeaceae

Sphaceloma perseae Avocado scab

mitosporic fungi (Coelomycetes) **Sphaeropsidales** Sphaerioidaceae Phomopsis perseae fruit rot mitosporic fungi (Hyphomycetes) Hyphomycetales Dematiaceae Pseudocercospora purpurea cercospora spot blotch unknown Hyphomycetes unknown Hyphomycetes

**Bacteria** 

Pseudomonadaceae

Stilbella cinnabarina

Pierce's disease Xylella fastidiosa

Virus

Avocado cryptic virus 3

Viroid

Avocado sunblotch viroid [strains not in New Zealand] Potato spindle tuber viroid

Disease of unknown aetiology

Avocado black streak

# Inspection, Testing and Treatment Requirements for Persea

ORGANISM TYPES	MPI-ACCEPTED METHODS (See notes below)		
Insects	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions) [cuttings only].		
Mites	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].		
Fungi	Growing season inspection in PEQ for disease symptom expression.		
Bacteria			
Xylella fastidiosa	Growing season inspection in PEQ for disease symptom expression AND PCR		
Virus			
Avocado cryptic virus 3	Pest free area or Pest free place of production AND Growing season inspection in PEQ for disease symptom expression.		
Viroid			
Avocado sunblotch viroid [strains not in New Zealand]	Hybridisation or PAGE or PCR (two sets).		
Potato spindle tuber viroid	Pest free area or Pest free place of production AND Growing season inspection in PEQ for disease symptom expression.		
Disease of unknown aetiology			
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 defined in section 2.3.2.1.
- 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, MPI will accept other internationally recognised testing methods.

**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 2.2.1.9 of the Basic Conditions are not required. **Additional Declarations:** 

"The *Phalaenopsis* spp. whole plants in MPI-approved growing media in this consignment:

- 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 MPI and Taiwan BAPHIQ,
- 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; Xylella fastidiosa

**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

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- b. 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; 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 *Phytophthora ramorum* (section 2.2.1.11)
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- c. Conditions for Gymnosporangium spp.
  - i) 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".

#### **AND**

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

#### **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; Phellinus noxius

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

### A. For Whole Plants

**PEO**: Level 3

**Minimum Period**: 3 months

a. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note**: Only applies to the following species: *Zelkova serrata* 

## **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 *Platanus*", and are additional to those specified in sections 1, 2 and 3 of the import health standard.

# **GENERAL CONDITIONS:**

**Approved Countries:** All

Quarantine Pests: Ceratocystis platani; 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 2.2.1.12) **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- b. Conditions for *Ceratocystis platani*: OPTION 1 or 2 below:

**OPTION 1:** Additional declaration: "The plants have been sourced from a country free from *Ceratocystis platani*"

### OPTION 2: For countries where *Ceretocystis platani* is known to be present

"The plants have been sourced from a state/province free from Ceratocystis
 platani or from a Pest Free Place of Production free from Ceratocystis
 platani"

#### **AND**

 The plants must be tested for *Ceratocystis platani* during the post entry quarantine period, at an MPI approved diagnostic facility.

Note: Countries where *Ceratocystis platani* is known to be present: Armenia, France, Greece, Italy, Switzerland. United States.

#### **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 *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 MPI-accredited facilities (quarantine stations)

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Poncirus*, the accredited facility operator must also have an agreement with MPI 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) <u>Inspection, Testing and Treatments of the consignment</u>

The inspection, testing and treatment requirements for specified regulated pests must be undertaken at the accredited facility as specified in the agreement between MPI 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 MPI 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 MPI (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 MPIaccredited facility
   AND
- held in a manner to ensure that infestation/reinfestation does not occur, following testing (and certification) at the accredited facilty.

### (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 MPI, 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 MPI 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) <u>Post-entry quarantine</u>

**PEQ**: Level 2. Plants must be held at 18-25°C throughout the quarantine period. **Quarantine Period**:

This is the time required to complete inspections and/or indexing to detect regulated pathogens. The quarantine period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

Indicative minimum quarantine periods are:

- 6 months for *Poncirus* cuttings sourced from mother plants that have been kept in insect proof plant houses, which may be extended to 12 months to allow for testing to be completed; or
- 16 months for *Poncirus* cuttings sourced directly from open ground mother plants.

# 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 MPI 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 MPI (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 MPI, and to conform with

the current phytosanitary requirements of MPI."

### (iv) <u>Inspection, Testing and Treatments of the consignment</u>

Following inspection at the border, upon arrival, the *Poncirus* cuttings will be directed to a facility accredited to the 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 MPI-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 MPI-accredited facility. Refer to *Poncirus* Inspection, Testing and Treatment Requirements following the *Poncirus* pest list.

# (v) <u>Post-entry quarantine</u>

**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 MPI-accredited facilities

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Poncirus*, the accredited facility operator must also have an agreement with MPI 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 MPI 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 MPI 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 MPI (refer to the pest list).

#### **AND**

- held and tested for/classified free from specified regulated pests at a MPIaccredited facility and,

#### **AND**

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

# (v) <u>Additional declarations to the phytosanitary certificate</u>

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 MPI, 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 MPI 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

**PEO**: 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) <u>Pest proof container and growing media for tissue culture</u>

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 MPI 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 MPI (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 MPI, and to conform with the current phytosanitary requirements of MPI."

# (v) <u>Inspection, Testing and Treatments of the consignment</u>

Upon arrival, the inspection, treatment and testing requirements for specified pests must be undertaken at a New Zealand Level 3 MPI-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

Apate indistincta shot-hole borer
Apate terebrans shot-hole borer

Buprestidae

 Āgrilus 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 tetropslonghorn beetleStrongylurus thoracicuspittosporum longicornUracanthus cryptophaguscitrus branch borer

Chrysomelidae

Colasposoma fulgidum bluegreen citrus nibbler

Colasposoma scutellare

Geloptera porosapitted apple beetleLuperomorpha funestamulberry flea beetleMonolepta australisred-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 recticollis -

Diaprepes abbreviatus citrus weevil

Diaprepes spp.

Eutinophaea bicristatacitrus leaf-eating weevilLeptopius squalidusfruit tree root weevilNaupactus xanthographusfruit tree weevilOtiorhynchus cribricolliscribrate weevil

Pachnaeus citri -

Pachnaeus litus citrus root weevil
Perperus lateralis white-striped weevil

Prepodes spp.

Protostrophus avidus weevil

Sciobius marshalli citrus snout beetle

Sympiezomias lewisi -

Lucanidae

Prosopocoilus spencei -

Scarabaeidae

Hypopholis indistinctascarab beetleMaladera matridascarab beetle

Scolytidae

Salagena sp. -

Xylosandrus germanus alnus ambrosia beetle

Diptera

Cecidomyiidae

Contarinia citri leafcurling midge Contarinia okadai leafcurling midge

Trisopsis sp. -

Chamaemviidae

Leucopis alticeps [Animals Biosecurity] -

Drosophilidae

Drosophila paulistorum Drosophila pseudoobscura Drosophila simulans Drosophila willistoni -

Tephritidae

Dirioxa pornia island fruit fly

Hemiptera

Anthocoridae

Orius thripoborus [Animals Biosecurity] Thriphleps thripoborus [Animals Biosecurity] -

Coreidae

Acanthocoris striicornislarger squash bugAnoplocnemis curvipescoreid bugLeptoglossus membranaceuscoreid bugMictis profanacrusader bug

Paradasynus spinosus squash bug
Veneza phyllopus leaf-footed bug

Lygaeidae

Nysius vinitor Rutherglen bug

Miridae

Austropeplus sp. citrus blossom bug

Pentatomidae

Antestia variegata antestia bug

Antestiopsis orbitalis -

Antestiopsis variegata antestia bug
Biprorulus bibax spined citrus bug

Glaucias subpunctatus polished green stink bug
Halyomorpha mista prown-marmorated stink bug

Musgraveia sulciventrisbronze orange bugPlautia stalioriental stink bugRhynchocoris humeralispentatomid bug

**Unknown Hemiptera** 

Holopterna vulga bug

Homoptera

Aleyrodidae

Aleurocanthus citriperdus whitefly

Aleurocanthus spiniferus orange spiny whitefly

Aleurocanthus spp.whitefliesAleurocanthus woglumicitrus blackflyAleurodicus dispersusspiralling whiteflyAleurolobus marlattiMarlatt whitefly

Aleuroplatus sp. whitefly

Aleurothrixus floccosus woolly whitefly

Aleurotuba jelinekii -

Aleurotuberculatus aucubae aucuba whitefly

Bemisia citricola

Dialeurodes citri citrus whitefly

Dialeurodes citrifolii cloudywinged whitefly

Dialeurolonga sp.

Parabemisia myricae Japanese bayberry whitefly Siphoninus phillyreae phillyrea whitefly

Aphididae

Aphis fabae bean aphid

Aulacorthum magnoliae Japanese elder aphid

Cicadellidae

Asymmetrasca decedens leafhopper Circulifer opacipennis -

Circulifer tenellusbeet leafhopperCuerna costalisleafhopperEdwardsiana flavescensleafhopper

Empoasca bodenheimeri-Empoasca citrusagreen citrus leafhopperEmpoasca decipiensgreen leafhopper

Empoasca decipiens green leafhopper
Empoasca distinguenda -

Empoasca fabaepotato leafhopperEmpoasca onukiitea green leafhopperHomalodisca coagulataglassy-winged sharpshooter

Homalodisca lacerta-Jacobiasca lybicacotton jassidNeoaliturus haematocepsleafhopperPenthimiola bellacitrus leafhopperScaphytopius nitridusleafhopper

Cicadidae

Cryptotympana facialis black cicada
Meimuna opalifera elongate cicada

Coccidae

Ceroplastes floridensisFlorida wax scaleCeroplastes japonicuspink wax scaleCeroplastes rubensred wax scaleCeroplastes ruscifig wax scaleCoccus celatus-

Coccus pseudomagnoliarum citricola scale

Coccus viridis green scale
Cribrolecanium andersoni green scale
white powder

Cribrolecanium andersoniwhite powdery scaleGascardia brevicaudawhite waxy scaleProtopulvinaria pyriformispyriform scalePulvinaria aethiopicasoft green scalePulvinaria aurantiicitrus cottony scalePulvinaria cellulosapulvinaria scale

Saissetia citricola citrus string cottony scale

Saissetia somereni

Dactylopiidae

Dactylopius filamentosis
Dactylopius vastator

Diaspididae

Aonidiella citrina yellow scale
Chrysomphalus aonidum Florida red scale
Chrysomphalus bifasciculatus brown scale

Chrysomphalus dictyospermidictyospermum scaleChrysomphalus pinnuliferafalse purple scaleIschnaspis longirostrisblack thread scaleLepidosaphes beckiipurple scaleLepidosaphes gloveriiGlover scale

Parlatoria ziziphi black parlatoria scale camphor scale

Selenaspidus articulatus West Indian red scale Unaspis citri citrus snow scale

Unaspis yanonensis Japanese citrus scale Flatidae Colgar peracuta Geisha distinctissima green broad-winged planthopper green flatid planthopper Lawana conspersa Metcalfa pruinosa planthopper Fulgoridae Anzora unicolor Margarodidae Drosicha howardi persimmon mealybug Icerya seychellarum Seychelles scale Ortheziidae Nipponorthezia ardisiae ensign scale Pseudococcidae Allococcus spp. Ferrisia consobrina mealybug Ferrisia virgata striped mealybug Nipaecoccus vastator nipa mealybug Nipaecoccus viridis hibiscus mealybug spherical mealybug Paracoccus burnerae Planococcus kraunhiae Japanese wisteria mealybug citrus mealybug Planococcus lilacinus Planococcus minor passionvine mealybug Pseudococcus citriculus smaller citrus mealybug Pseudococcus commonus Pseudococcus filamentosus mealybug Rastrococcus spinosus mealybug Kondo mealybug Rhizoecus kondonis **Psyllidae** Diaphorina citri citrus psyllid Trioza erytreae [vector] citrus psyllid Ricaniidae Scolypopa sp. Tropiduchidae Tambinia sp. Hymenoptera **Aphelinidae** Aphytis africanus [Animals Biosecurity] Aphytis holoxanthus [Animals Biosecurity] Aphytis lepidosaphes [Animals Biosecurity] Aphytis lingnanensis [Animals Biosecurity] Aphytis melinus [Animals Biosecurity] Azotus platensis [Animals Biosecurity] Cales noacki [Animals Biosecurity] Cales orchamoplati [Animals Biosecurity] Centrodora penthimiae [Animals Biosecurity] Coccophagus caridei [Animals Biosecurity] Coccophagus pulvinariae [Animals Biosecurity] Encarsia ectophaga [Animals Biosecurity] Encarsia lahorensis [Animals Biosecurity] Encarsia lounsburyi [Animals Biosecurity] Encarsia opulenta [Animals Biosecurity] Encarsia smithi [Animals Biosecurity] Eretmocerus serius [Animals Biosecurity] Marietta connecta [Animals Biosecurity] Marietta leopardina [Animals Biosecurity] Braconidae Apanteles aristotalilae [Animals Biosecurity] Biosteres longicaudatus [Animals Biosecurity] Pholetesor ornigis [Animals Biosecurity] Encyrtidae

Anicetus beneficus [Animals Biosecurity]

Comperiella bifasciata [Animals Biosecurity] Habrolepis rouxi [Animals Biosecurity] Leptomastix dactylopii [Animals Biosecurity] parasitic wasp Metaphycus helvolus [Animals Biosecurity] Metaphycus luteolus [Animals Biosecurity] Metaphycus stanleyi [Animals Biosecurity] Metaphycus varius [Animals Biosecurity] Psyllaephagus pulvinatus [Animals Biosecurity] Eulophidae Aprostocetus ceroplastae [Animals Biosecurity] Elachertus fenestratus [Animals Biosecurity] Tamarixia radiatus [Animals Biosecurity] Eupelmidae Anastatus biproruli [Animals Biosecurity] Eurytomidae Bruchophagus fellis citrus gall midge Formicidae Acromyrmex octospinosus leaf-cutting ant Anoplolepis braunsi [Animals Biosecurity] Anoplolepis custodiens ant Anoplolepis steingroeveri [Animals Biosecurity] black ant Atta cephalotes leaf-cutting ant Atta sexdens Atta texana Texas leaf-cutting ant Camponotus rufoglaucus Crematogaster castanea Crematogaster liengmei Crematogaster peringueyi [Animals Biosecurity] cocktail ant Lepisiota capensis [Animals Biosecurity] Myrmicaria natalensis Pheidole tenuinodis ant Polyrhachis schistaceus ant Solenopsis invicta [Animals Biosecurity] red imported fire ant Tapinoma arnoldi Technomyrmex albipes foreli [Animals Biosecurity] Mymaridae Chaetomymar gracile [Animals Biosecurity] Chaetomymar lepidum [Animals Biosecurity] Gonatocerus incomptus [Animals Biosecurity] Platygasteridae Amitus hesperidum [Animals Biosecurity] Amitus spiniferus [Animals Biosecurity] Fidiobia citri [Animals Biosecurity] Scelionidae Trissolcus oeneus [Animals Biosecurity] Trissolcus oenone [Animals Biosecurity] Trissolcus ogyges [Animals Biosecurity] Signiphoridae Signiphora fax [Animals Biosecurity] Signiphora flavella [Animals Biosecurity] Signiphora perpauca [Animals Biosecurity] Trichogrammatidae Trichogramma platneri [Animals Biosecurity] Vespidae *Polistes* spp. [Animals Biosecurity] paper wasps Isoptera Termitidae Odontotermes lokanandi termite Lepidoptera Arctiidae Lemyra imparilis mulberry tiger moth

Blastobasidae

Holcocera iceryaeella

Cosmopterigidae

Pyroderces rileyi pink scavenger caterpillar

Geometridae

Anacamptodes fragilariakoa haole looperAscotis selenaria reciprocariacitrus looperGymnoscelis rufifasciatageometrid moth

Hyposidra talaca -

Gracillariidae

Phyllocnistis citrella citrus leafminer

Hepialidae

Endoclita excrescens Japanese swift moth

Endoclita sinensis -

Lycaenidae

Virachola isocrates pomegranate butterfly

Lymantriidae

Orgyia vetusta western tussock moth

Metarbelidae

Indarbela tetraonis stem borer

Noctuidae

Arcte coerulafruit-piercing mothEudocima fulloniafruit-piercing moth

Helicoverpa assultacape gooseberry budwormHelicoverpa punctigeraoriental tobacco budwormTiracola plagiatabanana fruit caterpillar

Xylomyges curialis noctuid moth

Nymphalidae

Charaxes jasius nymphalid butterfly

Oecophoridae

Psorosticha melanocrepidacitrus leafrollerPsorosticha zizyphicitrus leafrollerStathmopoda auriferellaapple heliodinid

Papilionidae

Papilio aegeus aegeus -

Papilio anactus small citrus butterfly

Papilio cresphontes orange dog

Papilio dardanus cenea -

Papilio demodocus orange dog

Papilio demoleus demoleus Papilio helenus nicconicolens Papilio machaon asiatica -

Papilio memnon citrus swallowtail

Papilio memnon thunbergii Papilio nireus lyaeus Papilio polytes polytes Papilio protenor demetrius -

Papilio xuthuscitrus swallowtailPapilio zelicaonanise swallowtail

Psychidae

Eumeta hardenbergi -Eumeta japonica -

Eumeta minuscula tea bagworm

Eumeta moddermanni -

Hyalarcta huebneri leaf case moth

**Pyralidae** 

Apomyelois ceratoniae date pyralid

Tortricidae

Adoxophyes sp. -

Amorbia cuneana leafroller

Archips argyrospilus fruit tree leafroller

Archips machlopis leafroller
Archips occidentalis leafroller

Archips rosanusrose leafrollerArgyrotaenia citranaorange tortrixCacoecimorpha pronubanacarnation leafroller

Cryptophlebia batrachopa -

Cryptophlebia leucotretafalse codling mothHomona magnanimaoriental tea tortrixIsotenes miseranaorange fruitborerPlatynota stultanaomnivorous leafrollerTortrix capensanatortricid moth

Yponomeutidae

Prays citri citrus flower moth Prays parilis citrus flower moth

Neuroptera Chrysopidae

Chrysopa oculata [Animals Biosecurity] -

Conioptervgidae

Coniopteryx vicina [Animals Biosecurity] Conwentzia barretti [Animals Biosecurity] -

Orthoptera Acrididae

Zonocerus elegans elegant grasshopper

Gryllidae

Ornebius kanetataki cricket

Tettigoniidae

Caedicia sp. -

Holochlora japonicaJapanese broadwinged katydidMicrocentrum retinervesmaller angular-winged katydid

Scudderia furcata fork-tailed bush katydid

Psocoptera

Archipsocidae

Archipsocus sp. bark louse

Thysanoptera Aeolothripidae

Franklinothrips vespiformis [Animals Biosecurity] -

Thripidae

Chaetanaphothrips orchidiibanana rust thripsLeptothrips maliblack hunter thripsScirtothrips aurantiicitrus thripsScirtothrips citricitrus thripsScirtothrips dorsalischilli thripsScirtothrips mangiferaemango thrips

Scolothrips sexmaculatus [Animals Biosecurity] Taeniothrips kellyanus Taeniothrips sp. Thrips coloratus thrips
Thrips flavus flower thrips
Thrips palmi palm thrips

**Unknown Insecta** 

**Unknown Insecta** 

Cosmophyllum pallidulum -

Mite

Arachnida

Acarina Acaridae

Thyreophagus entomophagus italicus [Animals

Biosecurity] **Anystidae** 

Anystis agilis [Animals Biosecurity] -

Eriophyidae

Aculops pelekassi eriophyid mite
Tegolophus australis brown citrus mite

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Phytoseiidae

Amblyseius addoensis [Animals Biosecurity] Amblyseius citri [Animals Biosecurity] Amblyseius swirskii [Animals Biosecurity] Euseius hibisci [Animals Biosecurity] Euseius scutalis [Animals Biosecurity] Euseius stipulatus [Animals Biosecurity] Euseius tularensis [Animals Biosecurity] -

Iphiseius degenerans [Animals Biosecurity] predatory mite

Typhlodromus athiasae [Animals Biosecurity]

Stigmaeidae

Agistemus africanus [Animals Biosecurity] Agistemus tranatalensis [Animals Biosecurity] Eryngiopus siculus [Animals Biosecurity] -

Tarsonemidae

Tarsonemus cryptocephalus [Animals Biosecurity]

Tenuipalpidae

Brevipalpus chilensisfalse spider miteBrevipalpus lewisibunch miteBrevipalpus obovatusprivet mite

Tenuipalpus emeticae [Animals Biosecurity] -

Tuckerella ornata -

Ultratenuipalpus gonianaensis tenuipalpid mite

Tetranychidae

Calacarus citrifolii clover mite tetranychid mite Eotetranychus kankitus Eotetranychus lewisi big beaked plum mite Eotetranychus yumensis Yumi spider mite Eutetranychus africanus tetranychid mite Eutetranychus banksi Texus citrus mite Eutetranychus orientalis pear leaf blister mite Oligonychus mangiferus mango spider mite Tetranychus kanzawai kanzawa mite

Tuckerellidae

Tuckerella knorri hawthorn spider mite

Spider

Arachnida

Araneae

Clubionidae

Cheiracanthium mildei [Animals Biosecurity]

Theridiidae

Theridion sp. [Animals Biosecurity]

Mollusc

Gastropoda

Stylommatophora

Achatinidae

Achatina immaculata -

Lissachatina immaculata snail

Bradybaenidae

Acusta despecta sieboldiana snail

Subulinidae

Rumina decollata snail

Urocyclidae

Urocyclus flavescens -Urocyclus kirkii -

**Fungus** 

Ascomycota

Diaporthales

Valsaceae

Diaporthe rudis (anamorph Phomopsis rudis) phomopsis canker **Dothideales** Elsinoaceae Elsinoe australis sweet orange scab Capnodiaceae Capnodium citri sooty mould Didymosphaeriaceae Didymosphaeria sp. Mycosphaerellaceae Guignardia citricarpa (anamorph Phyllosticta citrus black spot citricarpa) [black spot strain] Mycosphaerella citri (anamorph Stenella citri-grisea) rind blotch Mycosphaerella horii greasy spot **Patellariales** Patellariaceae Rhytidhysteron rufulum Saccharomycetales Saccharomycetaceae Debaryomyces hansenii Galactomyces citri-aurantii (anamorph Geotrichum sour rot citri-aurantii) **Basidiomycota: Agaricomycetes** Hymenochaetales Hymenochaetaceae Phellinus noxius brown root rot **Basidiomycota: Basidiomycetes Boletales** Coniophoraceae Coniophora eremophila brown wood rot **Basidiomycota: Teliomycetes Septobasidiales** Septobasidiaceae Septobasidium pseudopedicellatum felt fungus Mitosporic Fungi **Unknown Mitosporic Fungi Unknown Mitosporic Fungi** Sphaceloma fawcettii var. scabiosa Mitosporic Fungi (Coelomycetes) **Sphaeropsidales** Sphaerioidaceae Macrophoma mantegazziana Phoma erratica var. mikan Phoma tracheiphila mal secco Phomopsis sp. rot Septoria spp. Sphaeropsis tumefaciens stem gall **Unknown Coelomycetes Unknown Coelomycetes** Aschersonia placenta [Animals Biosecurity] Gloeosporium foliicolum fruit rot Mitosporic Fungi (Hyphomycetes) **Hyphomycetales** Dematiaceae Alternaria limicola Alternaria pellucida Cercospora microsora Phaeoramularia angolensis cercospora spot Stemphylium rosarium Ulocladium obovoideum ulocladium rot **Unknown Hyphomycetes Unknown Hyphomycetes** Aureobasidium sp.

Hirsutella thompsonii [Animals Biosecurity] ---

Isaria sp. [Animals Biosecurity]

Oidium tingitaninum powdery mildew

Sporobolomyces roseus --Stenella sp. --

Zygomycota: Zygomycetes

Glomales Glomaceae

Glomus etunicatum [Animals Biosecurity]

Mucorales

Syncephalastraceae

Syncephalastrum racemosum

#### **Bacterium**

#### **Bacterium family unknown**

Indian citrus mosaic badnavirus

Liberobacter africanumcitrus greening bacteriumLiberobacter asiaticumcitrus greening bacteriumLiberobacter sp.citrus greening bacterium

Spiroplasma citri citrus stubborn

Pseudomonadaceae

Burkholderia cepacia sour skin Xanthomonas axonopodis pv. citri citrus canker

Xanthomonas campestris pv. aurantifolii

Xanthomonas campestris pv. citrumelo citrus bacterial spot Xylella fastidiosa Pierce's disease

Xylella fastidiosa pv. citri variegated chlorosis of citrus

### Virus

citrus cachexia viroid citrus chlorotic dwarf citrus infectious variegation ilarvirus citrus infectious variegation ilarvirus [crinkly leaf 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 [Natsudaidai dwarf strain] xyloporosis viroid yellow vein clearing of lemon

#### Phytoplasma

Candidatus 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 cristacortis 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	MPI ACCEPTABLE METHODS		
Insects	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of		
	the basic conditions).		
Mites	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the		
	basic conditions).		
Fungus	Country freedom OR growing season inspection for symptom expression.		
Bacterium			
Burkholderia cepacia	Growing season inspection for symptom expression.		
Liberobacter africanum	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.		
Liberobacter asiaticum	Country freedom OR graft-inoculated sweet oranges, orange pineapple, 18 to 25°C.		
Spiroplasma citri	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.		
Xanthomonas	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR		
axonopodis pv. citri	suitable citrus indicator.		
Xanthomonas	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR		
campestris pv.	suitable citrus indicator.		
aurantifolii Xanthomonas	Country freedom/shoot tip grafting bioassay/detached leaf bioassay/ PCR OR		
campestris pv. citrumelo	suitable citrus indicator.		
Xylella fastidiosa	Country freedom/shoot tip grafting bioassay/ PCR/ELISA OR suitable citrus		
,	indicator.		
Xylella fastidiosa pv.	Country freedom/shoot tip grafting bioassay PCR/ELISA OR suitable citrus		
citri	indicator.		
Virus			
citrus chlorotic dwarf	Country freedom OR graft inoculated rough lemon at cool temperatures		
	temperatures 18 to 25°C.		
citrus infectious	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow		
variegation ilarvirus	indicators at cool temperatures 18 to 25°C.		
citrus infectious	Country freedom OR graft inoculated citron, sour orange, lemon, cidro etrog. Grow		
variegation ilarvirus	indicators at cool temperatures 18 to 25°C.		
[crinkly leaf strain]			
citrus leaf rugose ilarvirus	Country freedom OR graft inoculated Mexican lime or sour orange. Grow		
citrus leathery leaf virus	indicators at cool temperatures 18 to 25°C.  Country freedom OR Rangpur lime. Grow indicators at cool temperatures 18 to		
•	25°C.		
citrus leprosis	Country freedom OR graft inoculated sweet orange. Grow indicators at cool		
rhabdovirus	temperatures 18 to 25°C.		
citrus mosaic virus	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures		
citrus ringenet viene	18 to 25°C.  Country freedom OR graft inoculated dweet tangor, sweet orange, mandarin		
citrus ringspot virus	(Parson's Special). Grow indicators at cool temperatures 18 to 25°C.		
citrus tatter leaf	Country freedom OR graft inoculated Rusk citrange, rough lemon, <i>Citrus excelsa</i> ,		
capillovirus	citrange (Troyer). Grow indicators at cool temperatures 18 to 25°C.		
citrus tristeza	Country freedom OR ELISA, graft inoculated Mexican lime, sour orange and <i>Citrus</i>		
closterovirus [strains not	excelsa. Grow indicators at cool temperatures 18 to 25°C.		
in New Zealand]	1		
citrus yellow mosaic	Country freedom OR graft inoculated sweet orange, sour orange and citron.		
badnavirus			
citrus yellow mottle	Country freedom OR other suitable test.		
virus			
Indian citrus mosaic	Country freedom OR graft inoculated sweet orange at hot temperature 27 to 32°C.		
badnavirus			
navel orange infectious	Country freedom OR graft inoculated Satsums. Grow indicators at cool		
mottling virus	temperatures 18 to 25°C.		
satsuma dwarf	Country freedom OR graft inoculated satsums. Grow indicators at cool temperatures 18 to 25°C.		
nepovirus	10 to 23 C.		

ORGANISM TYPES	MPI ACCEPTABLE METHODS		
satsuma dwarf	Country freedom OR graft inoculated satsums. Grow indicators at cool temperature		
nepovirus [Natsudaidai	18 to 25°C.		
dwarf strain]			
yellow vein clearing of	Country freedom OR graft inoculated Mexican lime or sour orange. Grow indicators		
lemon	at cool temperatures 18 to 25°C.		
Viroid			
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-	Country freedom OR SPAGE and PCR on graft inoculated citron extract. Grow		
IV)	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.		
Disease of unknown aeti			
Australian citrus	Country freedom OR other suitable test		
dieback			
blind pocket	Country freedom OR graft inoculated dweet tangor, sweet orange or Citrus excelsa.		
r	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		
divide origin discuse	before releasing from quarantine.		
citrus fatal yellows	Country freedom OR graft inoculated <i>Citrus macrophylla</i> .		
citrus impietratura	Country freedom OR graft inoculated dweet tangor or sweet orange. Growth		
disease	indicators at cool temperatures 18 to 25°C.		
citrus sunken vein	Country freedom OR other suitable test.		
disease			
concave gum	Country freedom OR graft inoculated dweet tangor, sweet orange or Citrus excelsa.		
	Grow indicators at cool temperatures 18 to 25°C.		
cristacortis	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		
<i>y</i>	temperature 27 to 32°C.		
kassala disease	Country freedom, cuttings collected from kassala free area.		
lemon sieve tube	Country freedom OR other suitable test.		
necrosis			
shell bark of lemons	Country freedom OR other suitable test.		
zonate chlorosis	Country freedom, cuttings collected from kassala free area.		
Phytoplasma			
Candidatus phytoplasma	Country freedom OR graft inoculated lime. Grow indicators at cool temperatures 18		
aurantifolia	to 25°C.		
rubbery wood	Country freedom OR graft inoculated sweet orange or lemon. Grow citron at hot		
1000017 11000	temperature 27 to 32°C.		
* G	nted as aquivalence to a treatment		

<sup>\*</sup> Country freedom is accepted as equivalence to a treatment.

#### **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. With prior notification, MPI will accept other internationally recognised testing methods.

**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**: Ceratocystis fimbriata; Marssonina spp.; Phellinus noxius; Phytophthora ramorum; Uredinales; virus diseases; Xylella fastidiosa

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

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

**PEO**: Level 3

**Minimum Period**: 3 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8)
- b. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- c. Conditions for Xylella fastidiosa (section 2.2.1.12) **Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- d. Conditions for *Phellinus noxius* (section 2.2.1.13)

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

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MPI-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 MPI-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 MPI-accredited facilities in any country

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. The operator of the accredited facility must also have an agreement with MPI 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 MPI 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 MPI and the [name of the MPI-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 MPI and the [name of the MPI-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 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 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 non-accredited facilities in any country

## (i) <u>Documentation</u>

**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 MPI 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 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 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

Pacific flatheaded borer Chrysobothris mali

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

cucumber beetle Diabrotica speciosa

Monolepta australis red-shouldered leaf beetle

Prasoidea sericea leaf beetle

Curculionidae

Eremnus atratus black weevil

western province grain worm Eremnus cerealis

Eremnus setulosus grey weevil Naupactus xanthographus fruit tree weevil Orthorhinus cylindrirostris elephant weevil

Otiorhynchus armadillo weevil

**Scolvtidae** 

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

> coconut nut fall bug Amblypelta cocophaga Amblypelta nitida fruit-spotting bug

Leptoglossus occidentalis coreid bug

Lygaeidae

Macchiademus diplopterus grain chinch bug Nysius vinitor Rutherglen bug

Oxycarenus arctatus coon bug

Oxycarenus exitiotus fruit tree stinkbug

Miridae

Creontiades dilutus green mirid

Lygus cerasi -

Lygus elisus pale legume bug
Lygus lineolaris tarnished plant bug

Pentatomidae

Acrosternum hilare green stink bug

Antestiopsis orbitalis -

Euschistus servusbrown stink bugTessaratoma papillosalitchee stink bug

Homoptera Aleyrodidae

Parabemisia myricae Japanese bayberry whitefly

Aphididae

Aphis spiraecola [vector] spirea aphid

Brachycaudus amygdalinus short tailed almond aphid

Brachycaudus cardui thistle aphid Brachycaudus schwartzi aphid

Brachycaudus tragopogonis -

Dysaphis plantaginearosy apple aphidHyalopterus amygdalipeach aphidHyalopterus prunimealy plum aphidHysteroneura setariaerusty plum aphid

Myzus varianspeach-potato aphidPterochloroides persicaegiant brown bark aphid

Asterolecaniidae

Asterolecanium pustulans oleander pit scale

Cicadellidae

Edwardsiana rosae rose leafhopper

Coccidae

Ceroplastes floridensisFlorida wax scaleCeroplastes japonicuspink wax scaleCeroplastes rubensred wax scaleEulecanium pruinosumfrosted scale

Parthenolecanium persicaeEuropean peach scalePulvinaria innumerabiliscottony maple scale

Sphaerolecanium prunastri globose scale

Diaspididae

Aonidiella citrina yellow scale

Aonidiella orientalisoriental yellow scaleAspidiotus destructorcoconut scaleChrysomphalus aonidumFlorida red scaleChrysomphalus dictyospermidictyospermum scale

Diaspidiotus africanusgrey scaleDiaspidiotus ancylusPutnam scaleEpidiaspis leperiiItalian pear scaleParlatoria oleaeolive scale

Pseudaulacaspis pentagona white peach scale

Flatidae

Metcalfa pruinosa planthopper

Margarodidae

Icerya seychellarum Seychelles scale

Membracidae

Ceresa alta -

Ceresa bubalus buffalo tree hopper

Stictocephala inermis -

Pseudococcidae

Maconellicoccus hirsutus pink hibiscus mealybug

Pseudococcus maritimus grape mealybug

Hymenoptera Bethylidae

Goniozus sp. -

Eulophidae

Colpoclypeus florus -

Ichneumonidae

Phytodietus celcissimus -

Trichogrammatidae

Trichogrammatomyia tortricis -

**Isoptera** 

Kalotermitidae

Bifiditermes beesoni -

Rhinotermitidae

Coptotermes heimi -Heterotermes indicola -

**Termitidae** 

Microtermes unicolor termite
Odontotermes lokanandi termite

Lepidoptera

Arctiidae

Hyphantria cunea fall webworm

Choreutidae

Choreutis pariana apple leaf skeletonizer

Cossidae

Cossus cossus goat moth

Gelechiidae

Anarsia lineatella peach twig borer
Recurvaria nanella lesser bud moth
Recurvaria syrictis bud moth

Geometridae

Alsophila pometaria fall cankerworm
Operophtera brumata winter moth

Gracillariidae

Phyllonorycter cerasicolella leafminer

Lasiocampidae

Malacosoma californicum fragiletent caterpillarMalacosoma disstriaforest tent caterpillar

Limacodidae

Doratifera vulnerans mottled cup moth

Latoia latistriga plum slug

Lymantriidae

Orgyia antiquarusty tussock mothOrgyia gonostigmavapourer moth

Metarbelidae

Indarbela quadrinotata wood-borer moth

Noctuidae

Alabama argillaceacotton leafwormMamestra brassicaecabbage mothPeridroma sauciavariegated cutwormSchizura concinnaredhumped caterpillar

Spodoptera frugiperda fall armyworm

Xestia c-nigrum spotted cutworm

Notodontidae

Datana ministra yellow-necked caterpillar

Oecophoridae

Cryptophasa melanostigma fruit tree borer
Maroga melanostigma fruit tree borer

Papilionidae

Papilio rutulus -

**Pyralidae** 

Conogethes punctiferalis yellow peach moth Euzophera bigella quince moth

Euzophera semifuneralisAmerican plum borerOstrinia nubilalisEuropean corn borer

Saturniidae

Antheraea polyphemus emperor moth

Sesiidae

Synanthedon exitiosa peach tree borer
Synanthedon pictipes lesser peach tree borer

**Sphingidae** 

Sphinx drupiferarum plum sphinx

Tortricidae

Acleris minuta yellow headed fireworm

Adoxophyes oranareticulated tortrixArchips argyrospilusfruit tree leafrollerArchips oporanusfruit tree tortrixArchips podanusfruit tree tortrix

Archips purpuranus -

Archips rosanus rose leafroller Argyrotaenia citrana orange tortrix

Argyrotaenia ljungianagrey red-barred tortrixArgyrotaenia velutinanared-banded leafroller

Choristoneura albaniana leafroller

Choristoneura rosaceana oblique-banded leafroller

Cryptoptila immersanaivy leafrollerCydia caryanahickory shuckwormCydia packardicherry fruitwormCydia prunivoralesser appleworm

Epichoristodes acerbella South African carnation worm

Hedya dimidioalbagreen budwormPandemis cerasanabarred fruit tree tortrixPandemis heparanadark fruit tree tortrix

Pandemis heparanadark fruit tree tortrixPlatynota flavedanaapple bud mothPlatynota idaeusalistufted apple bud mothProeulia aurariagrapevine leafroller

Proeulia chrysopteris grapevine leaf-rolling tortricid

Sparganothis reticulatana leafroller

Spilonota ocellana eyespotted bud moth

Tortrix capensana tortricid moth

Tortrix cinderella -

Orthoptera Acrididae

Acanthacris ruficornis -

Phymateus leprosus bush locust

Thysanoptera Thripidae

Frankliniella tritici eastern flower thrips

Taeniothrips meridionalis thrips

Thrips angusticeps Thrips flavus cabbage thrips flower thrips

#### Mite

#### Arachnida

#### Acarina

#### Acaridae

Caloglyphus haripuriensis acarid mite

#### Eriophyidae

Acalitus phloecoptes plum bud gall mite

Aceria chinensis -

Aculus fockeui [vector] eriophyid mite

Cenopalpus lanceolatisetae -

Cenopalpus pulcher flat scarlet mite Epitrimerus pyri pear leaf blister mite

Eriophyes armeniacus - Eriophyes catacardiae -

Eriophyes emarginataeeriophyid miteEriophyes inaequaliseriophyid miteEriophyes padieriophyid miteEriophyes similiseriophyid mitePhytoptus insidiosuspineapple fruit mite

#### Tarsonemidae

Tarsonemus pruni tarsonemid mite

Tarsonemus randsi -

Tarsonemus smithi tarsonemid mite

#### Tenuipalpidae

Rhinotergum schestovici mite

Tenuipalpus persicae false spider mite
Tenuipalpus taonicus false spider mite

#### Tetranychidae

Aplonobia citri Japanese citrus rust mite

Bryobia rubrioculus f. sp. prunicola brown mite

apricot spider mite Eotetranychus boreus Eotetranychus carpini tetranychid mite Eotetranychus carpini borealis yellow spider mite hickory scorch mite Eotetranychus pruni Eotetranychus uncatus Lewis spider mite African red spider mite Eutetranychus africanus Eutetranychus enodes tetranychid mite Eutetranychus orientalis pear leaf blister mite Oligonychus gossypii tetranychid mite Oligonychus mangiferus mango spider mite Tetranychus canadensis fourspotted spider mite

Tetranychus kanzawai kanzawa mite

Tetranychus neocaledonicus

Tetranychus pacificus

Tetranychus pacificus

Tetranychus viennensis

Mexican spider mite

Pacific spider mite

twospotted mite

#### Nematode

Secernentea

**Tylenchida** 

Pratylenchidae

Pratylenchus brachyurus root lesion nematode

## Fungus

Ascomycota

Calosphaeriales	
Calosphaeriaceae	
Calosphaeria pulchella	
Diaporthales	
Valsaceae	
Apiognomonia erythrostoma	
Diaporthe decorticans	-
Diaporthe pennsylvanica	-
Diaporthe pruni	-
Leucostoma cincta (anamorph Cytospora cincta)	canker
Dothideales	
Botryosphaeriaceae	
Auerswaldiella puccinioides	-
Mycosphaerellaceae	
Mycosphaerella cerasella (anamorph Cercospora	leaf spot
circumscissa)	
Mycosphaerella nigerristigma	-
Mycosphaerella pruni-persicae (anamorph	frosty mildew
Miuraea persica)	
Schizothyriaceae	
Schizothyrium pomi (anamorph Zygophiala	fly speck
jamaicensis)	
Zopfiaceae	
Caryospora putaminum	
unknown Dothideales	
Apiosporina morbosa	black knot
Erysiphales	
Erysiphaceae	
Sphaerotheca armeniaca	
Leotiales	
Dermateaceae	
Blumeriella jaapii (anamorph Phloeosporella padi)	shot-hole
Dermea cerasi (anamorph Foveostroma	
drupacearum)	
Sclerotiniaceae	
Grovesinia pyramidalis (anamorph Cristulariella	target spot
moricola)	8F
Lambertella jasmini	rot
Lambertella pruni	fruit rot
Monilinia fructigena (anamorph Monilia	European brown rot
fructigena)	European orown for
Monilinia kusanoi	leaf blight
Monilinia seaveri	twig blight
Phyllachorales	twig oligin
Phyllachoraceae	
Polystigma rubrum	
Polystigma ussuriensis	
Taphringes Taphringes	
Taphring armeniage	witches' broom
Taphrina armeniacae	bladder fruit
Taphrina communis	bladder fruit
Taphrina confusa	
Taphrina flectans	-
Taphrina pruni-subcordatae	
Xylariales	
Xylariaceae	
Yylaria longiana	

Xylaria longiana

Xylaria mali black root rot

unknown Ascomycota Hyponectriaceae

Physalospora perseae peach blister canker

**Basidiomycota: Agaricomycetes** 

Hymenochaetales Hymenochaetaceae

Phellinus noxius brown root rot

**Basidiomycota: Basidiomycetes** 

Agaricales

Strophariaceae

Pholiota squarrosa wood decay

Tricholomataceae

Armillaria bulbosa armillaria root rot

Armillaria heimii -

Armillaria luteobubalina armillaria root rot Armillaria mellea (anamorph Rhizomorpha armillaria root rot

*subcorticalis*)

Armillaria ostoyae armillaria root rot
Armillaria tabescens armillaria root rot

Ganodermatales

Ganodermataceae

Ganoderma brownii wood decay Ganoderma lobatum white soft decay

Ganoderma lucidum (anamorph Polyporus wood rot

lucidus)

Ganoderma zonatum butt and stem rot

Hericiales

Gloeocystidiellaceae

Gloeocystidiellum porosum --

Laxitextum bicolor white rot

Hymenochaetales

Hymenochaetaceae

Phellinus igniarius -

Phellinus pomaceus white heart rot

Phellinus prunicola -

Microascales

Ceratocysticaceae

Ceratocystis fimbriata -

**Poriales** 

Coriolaceae

Coriolopsis gallicawhite rotFomes fomentariuswood decayFomitopsis cajanderiwood decayFomitopsis meliaewood decayFomitopsis pinicolabrown cubical rotFomitopsis roseabrown pocket rot

Fomitopsis spraguei butt rot
Gloeophyllum sepiarium brown rot
Gloeophyllum trabeum brown rot
Heterobasidion annosum (anamorph Spiniger wood rot

meineckellum)

Laetiporus sulphureus (anamorph Sporotrichum brown cubical rot

versisporum)

Oxyporus latemarginatus wood rot
Trametes velutina dieback
Trichaptum biforme white rot

Tyromyces chioneus white rot

Tyromyces tephroleucus -

Polyporaceae

Polyporus squamosus wood rot

Stereales

Corticiaceae

Phanerochaete arizonicawhite rotPhanerochaete crassawhite rot

Cyphellaceae

Maireina marginata wood decay

Hyphodermataceae

Schizopora paradoxa wood rot

Sistotremataceae

Phymatotrichopsis omnivora Texas root rot

Steccherinaceae

Irpex lacteus wood rot

Stereaceae

Stereum strigoso-zonatum silver leaf

Thelephorales

Thelephoraceae

Corticium koleroga web blight

**Basidiomycota: Teliomycetes** 

Uredinales Uropyxidaceae

Tranzschelia pruni-spinosae leaf rust

unknown Uredinales

Leucotelium pruni-persicae leucotelium white rust

Oomycota Pythiaceae

Pythaceae

Phytophthora ramorum Sudden oak death disease

Zygomycota: Zygomycetes

Mucorales

Gilbertellaceae

Gilbertella persicaria fruit rot

Mucoraceae

Rhizopus circinans --

mitosporic fungi

unknown mitosporic fungi unknown mitosporic fungi

Catenophora pruni ---Fumago vagans ---

mitosporic fungi (Coelomycetes)

Sphaeropsidales Sphaerioidaceae

Coniothyrium amygdali --

Coniothyrium prunicolum coniothyrium disease

Cytospora persicae -Diplodia pruni -Diplodia vulgaris -Diplodina persicae --

Nattrassia mangiferaestem-end rotPhoma persicaeleaf spotPhomopsis cinerascensfig cankerPhomopsis perseaefruit rot

Phyllosticta congesta phyllosticta rot

Phyllosticta laurocerasi leaf spot

Ministry for Primary Industries Import Health Standard 155.02.06: Importation of Nursery Stock

Phyllosticta persicae target leaf spot Phyllosticta serotina Phyllosticta virginiana Septoria pruni unknown Coelomycetes unknown Coelomycetes Asteromella mali Cylindrosporium nuttallii Gloeosporium laeticolor anthracnose Melanconium cerasinum Pestalotia laurocerasi leaf spot peach canker Rhodosticta quercina mitosporic fungi (Hyphomycetes) Hyphomycetales **Dematiaceae** Alternaria mali alternaria blotch Cercospora effusa Cercospora rubrotincta leaf spot Clasterosporium degenerans Mycocentrospora cladosporioides fruit spot Phialophora parasitica stem dieback Moniliaceae Monilia angustior rot Monilia implicata rot unknown Hyphomycetes unknown Hyphomycetes Aureobasidium prunicola fruit rot Candida inconspicua sour pit unknown fungi unknown fungi unknown fungi Morrisographium persicae **Bacterium Bacillaceae** Bacillus mesentericus vulgatus Pseudomonadaceae Pseudomonas amygdali Pseudomonas syringae pv. cerasicola bacterial gall Spiroplasmataceae Spiroplasma citri citrus stubborn Xanthomonadaceae Xylella fastidiosa Pierce's disease Virus American plum line pattern virus Apple stem grooving virus [Prunus-infecting strain] -Apricot deformation mosaic virus Apricot latent virus Carnation Italian ringspot virus Cherry Hungarian rasp leaf virus Cherry leaf roll virus [strains not in New Zealand] Cherry line pattern and leaf curl virus Little cherry virus 2 Little cherry virus 3 Cherry mottle leaf virus Cherry rasp leaf virus [strains not in New Zealand] Cherry rosette virus Cherry rosette disease associated virus

Cherry rough fruit virus Cherry rusty mottle associated virus Cherry rusty mottle virus Cherry twisted leaf associated virus Cherry twisted leaf virus Epirus cherry virus Myrobalan latent ringspot virus Peach enation virus Peach mosaic virus Peach rosette mosaic virus Peach yellow leaf virus Petunia asteroid mosaic virus Plum bark necrosis stem pitting-associated virus Plum pox virus Prunus virus S Raspberry ringspot virus Sowbane mosaic virus Stocky prune virus Tomato bushy stunt virus Tomato ringspot virus Viroid Hop stunt viroid **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	MPI-ACCEPTED METHODS (See notes below)
Insects	Visual inspection AND <u>one</u> of the approved insecticide treatments
	(Refer to "Approved Treatments for <i>Prunus</i> ")
Mite	Visual inspection AND <u>one</u> of the approved miticide treatments (Refer
	to "Approved Treatments for <i>Prunus</i> ")
Fungi	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes
	upon arrival in the post entry quarantine facility.
	Growing season inspection in PEQ for disease symptom expression
	AND plating on potato dextrose agar.
Bacterium	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes
	upon arrival in the post entry quarantine facility.
Bacillus mesentericus vulgatus	Growing season inspection in PEQ for disease symptom expression.
Pseudomonas amygdali	Growing season inspection in PEQ for disease symptom expression.
Pseudomonas syringae	Growing season inspection in PEQ for disease symptom expression
pv. cerasicola	AND plating on King's B medium.
Spiroplasma citri	Growing season inspection in PEQ for disease symptom expression.
Xylella fastidiosa	Growing season inspection in PEQ for disease symptom expression
	AND PCR.
Virus	Triangle papers and the second
American plum line pattern virus	ELISA or PCR AND herbaceous indicators Chenopodium quinoa,
	Cucumis sativus and Nicotiana occidentalis
Apple stem grooving virus	ELISA or PCR AND herbaceous indicator Chenopodium quinoa
[Prunus-infecting strain]	W. 1. 1. 1. 1
Apricot deformation mosaic virus	Woody indicators
Apricot latent virus	Woody indicator ( <i>Prunus persica</i> cv. GF305) or herbaceous indicator
	(Nicotiana occidentalis)
Carnation Italian ringspot virus	Woody indicator ( <i>Prunus avium</i> cvs. Bing and Sam) or herbaceous
	indicator (Chenopodium quinoa)
Cherry Hungarian rasp leaf virus	Woody indicator ( <i>Prunus avium</i> cv. Bing) or herbaceous indicator ( <i>Cucumis sativum</i> )
Cherry leaf roll virus [strains not	Woody indicators AND ELISA or PCR AND herbaceous indicators
in New Zealand]	Chenopodium quinoa, Cucumis sativus and Nicotiana benthamiana
Cherry line pattern and leaf curl	Woody indicators
virus	moody matematic
Cherry mottle leaf virus	Woody indicators AND ELISA or PCR AND herbaceous indicator
enerry metice telly riving	Chenopodium quinoa
Cherry rasp leaf virus [strains not	Woody indicators AND herbaceous indicators <i>Chenopodium quinoa</i> ,
in New Zealand]	Cucumis sativus and Nicotiana benthamiana
Cherry rosette disease associated	Woody indicators
virus	
Cherry rough fruit virus	Woody indicator (Prunus avium cv. Bing)
Cherry rusty mottle virus	Woody indicators
Cherry twisted leaf virus	Woody indicators AND herbaceous indicator Nicotiana occidentalis
Epirus cherry virus	Woody indicators AND herbaceous indicators Chenopodium quinoa,
-	Cucumis sativus and Nicotiana benthamiana
Little cherry virus 2	Woody indicators
Myrobalan latent ringspot virus	Woody indicators AND herbaceous indicators Chenopodium quinoa,
	Cucumis sativus and Nicotiana benthamiana
Peach enation virus	Woody indicators AND herbaceous indicator Chenopodium quinoa
Peach mosaic virus	Woody indicators AND herbaceous indicator Chenopodium quinoa
Peach rosette mosaic virus	Woody indicators AND ELISA or PCR AND herbaceous indicators
	Chenopodium quinoa, Cucumis sativus and Nicotiana benthamiana
Peach yellow leaf virus	Woody indicator (Prunus persica cv. GF305).
Petunia asteroid mosaic virus	Woody indicators
Plum bark necrosis stem pitting-	Woody indicators
associated virus	

Plum pox virus	Woody indicators AND ELISA or PCR (two sets) AND herbaceous	
-	indicator Nicotiana benthamiana	
Prunus virus S	Woody indicator ( <i>Prunus persica</i> cv. GF305) or herbaceous indicator	
	(Chenopodium quinoa)	
Raspberry ringspot virus	Woody indicators AND herbaceous indicators Chenopodium quinoa,	
	Cucumis sativus and Nicotiana benthamiana	
Sowbane mosaic virus	Herbaceous indicator Chenopodium quinoa	
Stocky prune virus	Woody indicator ( <i>Prunus persica</i> cv. GF305)	
Tomato bushy stunt virus	ELISA or PCR AND herbaceous indicators Chenopodium quinoa,	
	Cucumis sativus and Nicotiana benthamiana	
Tomato ringspot virus	Woody indicators AND ELISA or PCR AND herbaceous indicators	
	Chenopodium quinoa, Cucumis sativus and Nicotiana benthamiana	
Viroid		
Hop stunt viroid	Hybridization or PAGE or PCR.	
Phytoplasmas	Nested PCR or real time PCR using universal phytoplasma primers.	
Diseases of unknown aetiology	Woody indicators AND growing season inspection in PEQ for disease	
	symptom expression.	

#### **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. 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.
- 3. Woody indexing:

Woody indicator	Prunus armeniaca	Prunus avium & Prunus cerasus	Prunus domestica & Prunus salicina	Prunus dulcis	All other Prunus spp.
<i>Prunus armeniaca</i> cv. Tilton	х3				х3
Prunus avium cv. Bing		<b>x</b> 3			
Prunus avium cv. Sam		х3			х3
<i>Prunus domestica</i> cv. Shiroplum		<b>x3</b>	х3		х3
Prunus persica ev. Elberta or GF305	<b>x4</b>	<b>x4</b>	x4	<b>x4</b>	x4
Total indicators	10	13	7	4	13

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.

- 4. Molecular tests for viroids. Tests are to be carried out on dormant, grafted cuttings during the winter after importation.
- 5. 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.
- 6. 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.

- 7. 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.
- 8. 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.
- With prior notification, MPI will accept other internationally recognised testing methods.

**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 2.2.1.11)

b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

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

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

## **Pyrus**

Scientific name	Commodity Sub-class	<b>Date Issued</b>
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; Ceratocystis fimbriata; Cryphonectria parasitica; Cronatium quercuum; Phytophthora ramorum; Xylella fastidiosa

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

#### A. For Whole Plants:

**PEO**: Level 3

Minimum Period: 3 months

- a. Conditions for *Ceratocystis fimbriata* (section 2.2.1.8) **Note:** Only applies to members of the *Quercus* genus
- b. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- c. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
   Guidance for importers: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*

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

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MPI-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; 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* (section 2.2.1.12)

## B. For Dormant Bulbs from Australia, Israel and South Africa:

## **OPTION 1:**

No import permit is required.

PEQ: None

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
   Note: Only nursery stock sourced from a country recognised by MPI as free from *Xylella fastidiosa* can be imported under this option.
- 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

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
  - **Note:** Only nursery stock sourced from a country recognised by MPI as free from *Xylella fastidiosa* can be imported under this option

## C. For Dormant Bulbs from the USA:

**PEO:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
  - **Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- b. Conditions for virus diseases: 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."

c. Conditions for *Phymatotrichopsis omnivora*:

**OPTION 1:** Additional declaration: "The dormant bulbs have been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*".

#### OR

**OPTION 2:** Additional declaration: "The dormant bulbs have been sourced from a "Pest free place of production", free from *Phymatotrichopsis omnivora*".

#### **AND**

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.

## D. For Dormant Bulbs from all other Countries:

## **OPTION 1:**

**PEO:** Level 1

**Minimum Period:** 3 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Note:** Only nursery stock sourced from a country recognized by MPI as free from *Xylella fastidiosa* can be imported under this option.
- b. Conditions for *Phymatotrichopsis omnivora*: Additional declaration: "The dormant bulbs have been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*"
- c. 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**

 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

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- b. Conditions for *Phymatotrichopsis omnivora*:
  - i) Additional declaration: "The dormant bulbs have been sourced from a "Pest free area", free from *Phymatotrichopsis omnivora*".

#### **AND**

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.

- c. 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**

 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".

## **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."

**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; Phellinus noxius; Pytophthora

ramorum; Uredinales

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

A. For Whole Plants:

**PEO:** Level 2

**Minimum Period:** 3 months

a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)

b. Conditions for *Phellinus noxius* (section 2.2.1.13)

Note: Only applies to the following species: Rhododendron xobtusum

- c. Measures for Microsphaera spp. and rust diseases:
  - i. Additional declaration:

"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) \_"•

Note: Applies to the following rust diseases: 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

ii. All visible flower buds are to be removed prior to export;

and

On arrival in New Zealand the plant material is to be treated, under the supervision of an Inspector, at a MPI-registered transitional facility by dipping in Benomyl, Carbendazim or Thiophanate methyl [choose one] at a rate of 250mg a.i. per litre.

# **B. For Cuttings: PEO:** Level 2

**Minimum Period:** 3 months

- a. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- b. Measures for *Microsphaera* spp. and rust diseases:
  - i. Additional declaration:

"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) \_"•

Note: Applies to the following rust diseases: 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

ii. All visible flower buds are to be removed prior to export; and

On arrival in New Zealand the plant material is to be treated, under the supervision of an Inspector, at a MPI-registered transitional facility by dipping in Benomyl, Carbendazim or Thiophanate methyl [choose one] at a rate of 250mg a.i. per litre.

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

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

## Ribes

Scientific name	<b>Commodity Sub-class</b>	<b>Date Issued</b>	
Ribes nigrum	Whole Plants	19 June 1998	
Ribes uva-crispa	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.

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

Whole plants, cuttings (non-dormant and dormant cuttings), plants in tissue culture

2. Quarantine pests

	C I			
Fungi	Phellinus noxius; Pucciniales			
Bacteria	Xylella fastidiosa			
Viruses	Blackberry chlorotic ringspot virus; Raspberry ringspot virus			
	(strains not in New Zealand); Rose rosette virus			
Phytoplasmas	'Candidatus Phytoplasma asteris'; 'Candidatus Phytoplasma			
	aurantifolia'; 'Candidatus Phytoplasma mali'; 'Candidatus			
	Phytoplasma prunorum'; 'Candidatus Phytoplasma rubi'			

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

**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* (section 2.2.1.12)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13)
- c. Conditions for viruses:

**OPTION 1:** Additional declaration:

"[Virus name] is absent/not known to occur in \_\_ [name of country] "

OR

**OPTION 2:** Pre-determined testing in PEQ; refer to "Inspection, Testing and Treatment Requirements for *Rosa*"

d. Conditions for phytoplasmas:

Pre-determined testing in PEQ; refer to "Inspection, Testing and Treatment Requirements for *Rosa*"

e. Conditions for Pucciniales:

**OPTION 1:** Additional declaration:

"The plants have been dipped in propiconazole at the rate of 5g a.i. per 10 litres of water"

#### OR

**OPTION 2:** For countries where propiconazole is not approved; additional declaration:

"The plants have been [dipped/sprayed until dripping] in [fungicide active ingredient]; a broad range systemic fungicide suitable for treating rust fungi from the Pucciniales order at the rate of [specify rate] at least 48 hours prior to shipment"

OR

**OPTION 3:** With prior arrangement with MPI, the plants may be dipped on arrival in New Zealand in propiconazole (5g a.i. per 10 litres of water); refer to section 2.3.2 "Treatment and Testing of the Consignment".

В.	For	Non-d	lormant	<b>Cuttings:</b>
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PEO: Level 2

Minimum Period: 6 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
- b. Conditions for viruses:

**OPTION 1:** Additional declaration:

"[Virus name] is absent/not known to occur in \_\_ [name of country] \_\_"

OR

**OPTION 2:** Pre-determined testing in PEQ; refer to "Inspection, Testing and Treatment Requirements for *Rosa*"

c. Conditions for phytoplasmas:

Pre-determined testing in PEQ; refer to "Inspection, Testing and Treatment Requirements for *Rosa*"

d. Conditions for Pucciniales:

**OPTION 1:** Additional declaration:

"The plants have been dipped in propiconazole at the rate of 5g a.i. per 10 litres of water"

OR

**OPTION 2:** For countries where propiconazole is not approved; additional declaration:

"The plants have been [dipped/sprayed until dripping] in [fungicide active ingredient]; a broad range systemic fungicide suitable for treating rust fungi from the Pucciniales order at the rate of [specify rate] at least 48 hours prior to shipment"

OR

**OPTION 3:** With prior arrangement with MPI, the plants may be dipped on arrival in New Zealand in propiconazole (5g a.i. per 10 litres of water); refer to section 2.3.2 "Treatment and Testing of the Consignment".

## **C. For Dormant Cuttings:**

**PEO:** Level 2

**Minimum Period**: 6 months

- a. Conditions for Xylella fastidiosa (section 2.2.1.12)
- b. Conditions for viruses:

**OPTION 1:** Additional declaration:

"[Virus name] is absent/not known to occur in \_\_ [name of country] "

OR

**OPTION 2:** Pre-determined testing in PEQ; refer to "Inspection, Testing and Treatment Requirements for *Rosa*"

c. Conditions for phytoplasmas:

Pre-determined testing in PEQ; refer to "Inspection, Testing and Treatment Requirements for *Rosa*"

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

**PEQ:** Level 2

Minimum Period: 6 months

a. Conditions for viruses:

**OPTION 1:** Additional declaration:

"[Virus name] is absent/not known to occur in \_\_ [name of country] \_\_"

OR

**OPTION 2:** Pre-determined testing in PEQ; refer to "Inspection, Testing and Treatment Requirements for *Rosa*"

b. Conditions for phytoplasmas:

Pre-determined testing in PEQ; refer to "Inspection, Testing and Treatment Requirements for *Rosa*"

Inspection, Testing and Treatment Requirements for Rosa

ORGANISM	MPI ACCEPTABLE METHODS	Comments
Insects	Visual inspection <b>AND</b> approved insecticide treatments as described in section 2.2.1.6 of the Basic conditions	Applies to whole plants and cuttings only
Mites	Visual inspection <b>AND</b> approved miticide treatments as described in the section 2.2.1.6 of the Basic conditions	Applies to whole plants and cuttings only
Fungus		
Phellinus noxius	Refer to section 2.2.1.13 "Measures for <i>Phellinus noxius</i> "	Applies to whole plants only
Pucciniales	Treatment; refer to part A and B of the <i>Rosa</i> schedule	Applies to whole plants and non-dormant cuttings only
Bacterium		
Xylella fastidiosa	Refer to section 2.2.1.12 "Measures for <i>Xylella fastidiosa</i> "	Applies to whole plants and cuttings only. Testing requirements for <i>Xylella</i> fastidiosa are identified in section 2.2.1.12.
Virus		
Blackberry chlorotic ringspot virus	PCR	Applies to whole plants, cuttings, and tissue culture
Raspberry ringspot virus (strains not in New Zealand)	PCR	Applies to whole plants, cuttings, and tissue culture
Rose rosette virus	PCR	Applies to whole plants, cuttings, and tissue culture
Phytoplasmas	Nested or real-time PCR using universal phytoplasma primers	Applies to whole plants, cuttings, and tissue culture

#### **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. **Sample collection:** 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.
- 3. **Time of testing:** Virus testing must be carried out using the new season's growth in the spring, or spring-like conditions. Bacteria and phytoplasmas testing must be carried out during late summer to early autumn, or during late summer-like conditions.

**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 MPI-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 MPI-accredited facilities in any country

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Rubus*, the accredited facility operator must also have an agreement with MPI 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 MPI 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 MPI and the [name of the MPI-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 MPI and the [name of the MPI-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) <u>Post-entry quarantine</u>

**PEQ**: All *Rubus* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to 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 (active continuous growth) in postentry 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 MPI 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 preshipment 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 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 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)**

<b>Insects</b>	
Insecta	

#### Coleoptera

#### Attelabidae

Rhynchites germanicus strawberry rhynchites

Buprestidae

Agrilus aurichalceusraspberry buprestidAgrilus rubicolaraspberry buprestidAgrilus ruficollisred-necked cane borer

Byturidae

Byturus ochraceus raspberry beetle

Byturus rubi eastern raspberry fruitworm

Byturus tomentosusraspberry beetleByturus unicolorraspberry fruitwormByturus urbanusraspberry beetle

Cerambycidae

Coreus marginatus longhorn beetle
Oberea bimaculata raspberry caneborer

Chrysomelidae

Batophila aerataraspberry flea beetleBatophila rubiraspberry flea beetle

Brachypnoea exilis grita flea beetle
Nodonota margaretae leaf beetle

Curculionidae

Anthonomus rubiapple blossom weevilAnthonomus signatusblossom weevilMerhynchites bicolorrose curculioMerhynchites wickhamicurculio

Nemocestes incomptusstrawberry root weevilOtiorhynchus clavipesred-legged weevilOtiorhynchus singularisclay covered weevilRhynchaenus fagistrawberry 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

Phyllopertha horticolagarden chaferPopillia japonicaJapanese beetle

Diptera

Agromyzidae

Agromyza spiraeae rose leafminer

Anthomyiidae

Pegomya rubivora raspberry cane maggot

Cecidomyiidae

Contarinia agrimoniae midge

Contarinia rubicolablackberry flower midgeDasineura plicatrixblackberry leaf midgeLasioptera rubiraspberry gall midgeResseliella theobaldiraspberry midge

Hemiptera

Anthocoridae

Orius vicinus raspberry bug

Miridae

Lygocoris pabulinus common green caspid

tarnished plant bug Lygus lineolaris

Macrolophus rubi mirid Psallus variabilis mirid

Pentatomidae

Dolycoris baccarum stink bug Pentatoma rufipes forest bug

Homoptera

Aetalionidae

Aetalion reticulatum

**Aphididae** 

strawberry aphid Amphorophora agathonica Amphorophora idaei large raspberry aphid

Amphorophora rubitoxica aphid

Aphis rubicola [vect.] raspberry aphid

Aphis ruborum permanent blackberry aphid

Macrosiphum funestum rose aphid Matsumuraja hirakurensis raspberry aphid

Cicadellidae

Dikrella californica blueberry leafhopper

leafhopper Dikrella cruentata Edwardsiana rosae rose leafhopper leafhopper Erythroneura rubiphylla Macropsis fulcatus leafhopper

Macropsis fuscula boysenberry leafhopper

Metascarta impressifrons leafhopper rubus leafhoppers

Typhlocyba spp.

lssidae

Mycterodus serbicus plant bug

**Psyllidae** 

Trioza tripunctata blackberry psyllid

Trioza trisignata psyllid

Hymenoptera Cephidae

> Hartigia albomaculata sawfly borer

Cynipidae

stem gall cynipids Diastrophus spp.

**Pamphilidae** 

Pamphilius sitkensis sawfly

Pergidae

Philomastix macleaii bramble sawfly

Tenthredinidae

banded rose sawfly Allantus cinctus

Emphytus calceatus sawfly

Empria tridens raspberry sawfly

Metallus pumilus raspberry leaf-mining sawfly Metallus rohweri raspberry leafmining sawflies

blackberry leafminer Metallus rubi

Monophadnoides geniculatus raspberry sawfly

Perineura rubi sawfly Sterictiphora furcata sawfly

Lepidoptera

Geometridae

Itame wauaria v-moth

Operophtera bruceata Bruce spanworm Operophtera brumata European winter moth

Hepialidae

Hepialus humuli ghost swift moth

Incurvariidae

Lampronia rubiella raspberry bud moth

Lymantriidae

Euproctis chrysorrhoea brown-tail moth Lymantria dispar Asian gypsy moth

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Orgyia antiqua rusty tussock moth Megalopygidae Megalopyge lanata Nepticulidae Stigmella aurella Stigmella splendidissimella Noctuidae Acronicta psi grey dagger moth Agrotis segetum turnip moth Cosmia trapezina dun-bar moth Akebia leaf-like moth Eudocima tyrannus Graphiphora augur double dart moth Melanchra persicariae dot moth Oraesia emarginata fruit-piercing moth Papaipema nebris stalk borer Peridroma saucia variegated cutworm Spirama retorta fruit sucking moth Xestia c-nigrum spotted cutworm Notodontidae Phalera bucephala buff-tip moth Saturniidae Saturnia pavonia silk moth Sesiidae Pennisetia hylaeiformis raspberry crownborer Pennisetia marginata raspberry crownborer Synanthedon bibionipennis strawberry crown moth Tortricidae Acleris comariana leafroller broad barred button moth Acleris laterana fruit tree tortix Archips oporanus Argyrotaenia citrana orange tortix Choristoneura rosaceana obliquebanded leafroller Cnephasia longana omnivorous leaftier Epiblema uddmanniana bramble shoot borer Olethreutes concinnana leafroller Olethreutes furfuranum leafroller Pandemis cerasana leafroller Spilonota ocellana eye-spotted bud moth **Orthoptera** Gryllidae Oecanthus nigricornis blackhorned tree cricket Oecanthus pellucens blackhorned tree cricket Phasmida Phasmatidae wingless stick insect Carausius morosus **Thysanoptera** Thripidae Thrips flavus flower thrips Arachnida Acarina **Eriophyidae** Cenopalpus pseudospinosus rust mite Epitrimerus gibbosus eriophyid mite Eriophyes rubi eriophyid mite Phyllocoptes gibbosus eriophyid mite Phyllocoptes gracilis raspberry mite Phyllocoptes rubi eriophyid mite Eupodidae

Tetranychidae

Neotetranychus rubi

Mites

raspberry mite

**Nematodes** 

Adenophorea

Dorylaimida

Longidoridae

Xiphinema bakeri dagger nematode Xiphinema barense dagger nematode

Secernentea

**Tylenchida** 

Criconematidae

Criconemella axestis -

Criconemella curvata ring nematode

Criconemella denoudeni -

Criconemella ornataring nematodeCriconemella sphaerocephalaring nematodeCriconemella xenoplaxring nematode

Dolichodoridae

Tylenchorhynchus claytoni tobacco stunt nematode

Hoplolaimidae

Helicotylenchus platyurus -Hoplolaimus magnistylus -

Scutellonema bradys yam nematode

Pratylenchidae

Hirschmanniella oryzae rice root nematode

**Fungi** 

**Ascomycota: Ascomycetes** 

Diaporthales Valsaceae

Gnomonia rostellata

Gnomonia rostellata -

Gnomonia rubi (anamorph Gloeosporium sp.) cane canker, dieback Gnomonia setacea cane canker, dieback

**Dothideales** 

Leptosphaeriaceae

Leptosphaeria thomasiana cane blight

Melanconidaceae

Sydowiella depressula

Mycosphaerellaceae

Mycosphaerella confusa (anamorph Pseudocercospora rubi)cercospora leaf spotMycosphaerella ligeacane & leaf spotMycosphaerella rubi (anamorph Septoria rubi)cane & leaf spot

Sphaerulina rubi (anamorph Cylindrosporium rubi)

Helotiales

Dermateaceae

Pyrenopeziza rubi cane spot

Sclerotiniaceae

Monilinia fructigena (anamorph Monilia fructigena) brown rot

Meliolales

Meliolaceae

Appendiculella calstroma black mildew

**Unknown Ascomycetes** 

Hormotheca rubicola -

**Basidiomycota: Basidiomycetes** 

**Agaricales** 

Tricholomataceae

Armillaria gallica armillaria root rot
Armillaria mellea (anamorph Rhizomorpha subcorticalis) shoestring root rot
Armillaria ostoyae armillaria root rot

Russulales

Lachnocladiaceae

Scytinostroma galactinum Scytinostroma galactinum **Unknown Basidiomycetes** Gerwasia epiphylla **Basidiomycota: Urediniomycetes Stereales** Sistotremataceae Phymatotrichopsis omnivora Texas root rot **Uredinales** Phragmidiaceae Arthuriomyces peckianus orange rust Gymnoconia nitens rust Hamaspora longissima sub-tropical rust Phragmidium alaskanum Phragmidium bulbosum rust Phragmidium occidentale Pucciniastraceae Pucciniastrum americanum late leaf rust Pucciniastrum arcticum Mitosporic Fungi (Coelomycetes) Hapalosphaeria deformans anther blight Macrophoma rubi leaf scorch Marssonina potentillae Phyllosticta carpogena **Mitosporic Fungi (Hyphomycetes)** Fusicladium grayianum Passalora monrosii Pseudocercospora heteromalla Pseudocercospora rubicola Verticillium albo-atrum [severe strain] verticillium wilt **Zygomycota: Zygomycetes** Mucorales Mucoraceae Rhizopus sexualis soft rot Chromista **Oomvcota Pythiaceae** Phytophthora idaei Phytophthora ramorum sudden oak death Phytophthora rubi root rot **Bacteria** Enterobacteriaceae Erwinia amylovora f.sp. rubi Rhizobiaceae Agrobacterium rubi cane gall Xanthomonadaceae Xylella fastidiosa Pierce's disease Viruses Black raspberry necrosis virus [strains not in New Zealand] Blackberry calico virus Blackberry chlorotic ringspot virus Blackberry virus Y Blackberry yellow vein associated virus Bramble yellow mosaic virus

#### **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 -

<sup>\*</sup>For organisms intercepted that are not listed within this pest list refer to the <u>Biosecurity</u> <u>Organisms Register for Imported Commodities</u> to determine the regulatory status.

# Inspection, Testing and Treatment Requirements for Rubus

ORGANISM TYPES	MPI-ACCEPTABLE METHODS
Insects	Visual inspection <b>AND</b> approved insecticide treatments as described in section 2.2.1.6 of the Basic conditions [cuttings only]
Mites	Visual inspection <b>AND</b> approved miticide treatments as described in the <u>section</u> 2.2.1.6 of the Basic conditions [cuttings only] <b>or</b> binocular microscope inspection in PEQ [plants in tissue culture only]
Fungi	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes upon arrival in the post entry quarantine facility.  Growing season inspection in PEQ for symptom expression
Chromista	Growing season inspection in PEQ for symptom expression
Bacteria	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes upon arrival in the post entry quarantine facility.
Erwinia amylovora f.sp. rubi	Growing season inspection for symptom expression AND PCR
Agrobacterium rubi	Growing season inspection for symptom expression
Xylella fastidiosa	Growing season inspection for symptom expression AND PCR
Viruses	
Black raspberry necrosis virus [strains not in New Zealand]	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i> <b>AND</b> PCR
Blackberry calico virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> )
Blackberry chlorotic ringspot virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> ) <b>AND</b> PCR
Blackberry virus Y	Country freedom <b>OR</b> RT-PCR using BVY-specific primers
Blackberry yellow vein associated virus	Country freedom <b>OR</b> PCR
Bramble yellow mosaic virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> )
Cherry rasp leaf virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa, Cucumis sativus</i> , and <i>Nicotiana clevelandii</i> ) <b>AND</b> ELISA or PCR
Hawaiian rubus leaf curl virus	Country freedom <b>OR</b> Growing season inspection for symptom expression
Raspberry latent virus	Country freedom <b>OR</b> PCR
Raspberry leaf curl virus	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i>
Raspberry ringspot virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa, Cucumis sativus</i> , and <i>Nicotiana clevelandii</i> ) <b>AND</b> ELISA or PCR
Rubus Chinese seedborne virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa, Cucumis sativus</i> , and <i>Nicotiana clevelandii</i> )
Rubus chlorotic mottle virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> )
Rubus yellow net virus	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i> <b>AND</b> PCR
Thimbleberry ringspot virus	Country freedom <b>OR</b> Graft indexing using <i>Rubus occidentalis</i>
Tobacco necrosis virus [strains not in New Zealand]	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa, Cucumis sativus</i> and <i>Nicotiana clevelandii</i> )

Tomato ringspot virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa, Cucumis sativus</i> , and <i>Nicotiana clevelandii</i> ) <b>AND</b> ELISA or PCR	
Wineberry latent virus	Country freedom <b>OR</b> Herbaceous indexing ( <i>Chenopodium quinoa</i> )	
Phytoplasmas		
Black raspberry witches'-broom phytoplasma	Country freedom <b>OR</b> Nested PCR or real time PCR using universal phytoplasma primers	
Rubus stunt phytoplasma	Country freedom <b>OR</b> Nested PCR or real time PCR using universal phytoplasma primers	
Diseases of unknown etiology		
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 MPI-accredited offshore facility. Country freedom must be endorsed by the exporting NPPO, and must be included in the agreement between MPI and the accredited offshore facility.
- **2.** The **unit for testing** is defined in section 2.3.2.1.
- **3. Tissue culture plantlets** must be potted up and grown in a MPI 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
  - 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.	<b>Inspection</b> of the <i>Rubus</i> 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 MPI Inspector on request.
12.	Other internationally recognised testing methods may be accepted by MPI 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., Phellinus noxius; Pytophthora

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 2.2.1.11)

b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

**Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa* 

c. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note**: Only applies to the following species: *Salix babylonica* 

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

As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2, but subject to examination at a MPI-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 for Primary Industries (MPI) 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 for Primary Industries (MPI) 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.			

**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*", and are additional to those specified in sections 1, 2 and 3 of the import health standard.

#### **GENERAL CONDITIONS:**

**Approved Countries**: All

Quarantine Pests: Potato spindle tuber viroid

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

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

PEQ: Level 2

**Minimum Period**: 3 months

**Additional declaration:** "The nursery stock in this consignment has been sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

#### **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 sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".

OR

"The cultures have been derived from parent stock tested by molecular methods (PCR) and found free from *Potato spindle tuber viroid*".

**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 MPI-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 medium requirements

The tissue culture medium 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 for Primary Industries (MPI) 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 MPI and the MPI-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 MPI and the [name of MPI-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, MPI reserves the right to validate all testing and audit all treatment processes that are undertaken by a facility accredited by MPI for testing/treatment purposes. This applies to MPI-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 medium requirements

The tissue culture medium 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) <u>Additional declarations to the phytosanitary certificate</u>

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 Level 3 post entry quarantine facility. Refer to *Solanum tuberosum* Inspection and Testing Requirements following the *Solanum tuberosum* pest list.

#### (vi) <u>Post-entry quarantine</u>

**PEO**: Level 3

**Quarantine Period**: Tissue cultures must be deflasked 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 MPI-accredited laboratories or facilities

For all imported *Solanum tuberosum* plants in tissue culture, MPI reserves the right to validate all testing and audit all treatment processes that are undertaken by a facility accredited by MPI for testing/treatment purposes. This applies to MPI-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 bacterial soft rot Dickeya chrysanthemi pv. chrysanthemi (syn. Erwinia chrysanthemi pv. chrysanthemi) Dickeya chrysanthemi pv. parthenii (syn. Erwinia chrysanthemi pv. parthenii) Dickeya paradisiaca (syn. Erwinia chrysanthemi pv. paradisiaca) 'Dickeva solani' Pectobacterium betavasculorum bacterial sudden yellows death (syn. Erwinia carotovora subsp. betavasculorum) Viroids Columnea latent viroid\* Pepper chat fruit viroid\* Potato spindle tuber viroid [transient] Tomato chlorotic dwarf viroid\* Tomato planta macho viroid\* Viruses Abutilon mosaic begomovirus\* Andean potato latent tymovirus Andean potato mild mosaic tymovirus Andean potato mottle comovirus Arracacha A nepovirus\* Arracacha B nepovirus Asparagus 3 potexvirus\* Beet curly top curtovirus

Cassava green mottle nepovirus\* Cassia mild mosaic carlavirus\* Cherry leaf roll nepovirus\*

Eggplant mosaic tymovirus*	-
Eggplant mottled dwarf nucleorhabdovirus	-
Henbane mosaic potyvirus*	_
Melilotus mosaic potyvirus*	_
Papaya mosaic potexvirus	_
Pelargonium line pattern carmovirus*	_
Pepino mosaic potexvirus	_
Pepper veinal mottle potyvirus*	_
Potato 14R tobamovirus	_
Potato black ringspot nepovirus	_
Potato deforming mosaic begomovirus	_
Potato latent carlavirus	_
Potato mop-top furovirus	_
Potato P carlavirus	_
Potato rough dwarf carlavirus	-
Potato virus T trichovirus	-
	-
Potato virus U nepovirus	-
Potato virus V potyvirus	-
Potato virus Y potyvirus [strains not in New Zealand]	-
Potato yellow dwarf nucleorhabdovirus	-
Potato yellow mosaic begomovirus	-
Potato yellow vein crinivirus	-
Potato yellowing alfamovirus	-
Solanum apical leaf curling begomovirus	-
Solanum yellows luteovirus	-
Southern potato latent carlavirus	-
Sowbane mosaic sobemovirus	-
Tobacco etch potyvirus*	-
Tobacco necrosis necrovirus [strains not in New	
Zealand]	
Tobacco necrotic dwarf luteovirus*	-
Tobacco rattle tobravirus [strains not in New Zealand]	-
Tobacco streak ilarvirus [strains not in New Zealand]	-
Tobacco stunt varicosavirus*	-
Tomato bushy stunt tombusvirus*	_
Tomato infectious chlorosis crinivirus	_
Tomato leaf curl begomovirus - Australia*	_
Tomato leaf curl begomovirus - New Delhi	_
Tomato top necrosis nepovirus*	_
Tomato yellow leaf curl begomovirus	_
Tomato yellow mosaic begomovirus	_
Tomato yellow vein streak begomovirus*	_
Wild potato mosaic potyvirus	_
mu poutro mosure poryvirus	
pplasmas	
Eggplant little leaf phytoplasma	
Eggpiant nuic icai phytopiasina	-

#### **Phyto**

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** MPI-accredited facilities, for Solanum tuberosum

ORGANISM TYPES	ACCEPTABLE METHODS	Comments
	(See Note 6 at the end of this table).	
Mites	Binocular microscope inspection.	
Fungi		
Aecidium cantensis	Growing season inspection in PEQ for symptom expression	
Phoma andigena var. andina	Growing season inspection in PEQ for symptom expression	
Phytophthora infestans (A2 mating strain)	Growing season inspection in PEQ for symptom expression	
Synchytrium endobioticum [official control]	Growing season inspection in PEQ for symptom expression	S. endobioticum cannot be cultured. It is identified by microscopic examination of affected plants. This organism belongs to the Myxomycetes in the Kingdom Protozoa.
Bacteria		
Clavibacter michiganensis subsp. sepedonicus	Growing season inspection in PEQ for symptom expression AND  Immunofluorescence or  ELISA AND grow plantlets on Murashige and Skoog medium (see note 18) or  PCR AND grow plantlets on Murashige and Skoog medium (see	
	note 18)	
Dickeya chrysanthemi pv. chrysanthemi	Growing season inspection in PEQ for symptom expression <b>AND</b> plating on selective pectate media <b>or</b> PCR	
Dickeya chrysanthemi pv. parthenii	Growing season inspection in PEQ for symptom expression <b>AND</b> plating on selective pectate media <b>or</b> PCR	
Dickeya paradisiaca	Growing season inspection in PEQ for symptom expression <b>AND</b> plating on selective pectate media <b>or</b> PCR	
'Dickeya solani'	Growing season inspection in PEQ for symptom expression <b>AND</b> plating on selective pectate media <b>or</b> PCR	
Pectobacterium betavasculorum	Growing season inspection in PEQ for symptom expression <b>AND</b> plating on selective pectate media e.g. crystal violet pectate medium <b>or</b> PCR	
Viroid		
Potato spindle tuber viroid [transient]	PCR using two sets of primers or Return PAGE (with silver staining) or Hybridisation (P32 or digoxigenin labelled RNA probes)	
Viruses	<u> </u>	
Arracacha B nepovirus	ELISA or PCR AND herbaceous indicators Ca	Sap transmitted with difficulty. ELISA must detect the oca strain
Andean potato latent tymovirus	ELISA or PCR AND herbaceous indicators Nb, No	

ORGANISM TYPES	ACCEPTABLE METHODS	Comments
	(See Note 6 at the end of this table).	Comments
Andean potato mild mosaic	PCR	
tymovirus		
Andean potato mottle comovirus	ELISA or PCR AND herbaceous	
D . 1	indicators Nc, Nd	
Beet curly top curtovirus	PCR	
Eggplant mottled dwarf	Herbaceous indicators Nb, Nc, Nd	
nucleorhabdovirus	и	
Papaya mosaic potexvirus	Herbaceous indicator Ca	
Pepino mosaic virus	Herbaceous indicators Nd, No, and Nt	N. C.II. I.
Potato 14R tobamovirus	Growing season inspection in PEQ for symptom expression	Not fully characterised.
Potato black ringspot nepovirus	ELISA or PCR AND herbaceous	
Totato black inigspot hepovirus	indicators Cq, No	
Potato deforming mosaic	PCR or ELISA	
begomovirus	TOR OF EDIST	
Potato latent carlavirus	PCR	
Potato mop-top furovirus	ELISA or PCR AND herbaceous	ELISA can be used to detect the
	indicators Ca, Cq, Nd	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	
Potato rough dwarf carlavirus	PCR	
Potato T trichovirus	ELISA or PCR AND Herbaceous indicators Ca, Cq	
Potato virus U nepovirus	Herbaceous indicators Ca, Cq	
Potato virus V potyvirus	ELISA or PCR	
Potato virus Y potyvirus [strains	ELISA or PCR AND herbaceous	
not in NZ]	indicators Nb, No	
Potato yellow dwarf	Herbaceous indicators Nc	
nucleorhabdovirus		
Potato yellow mosaic	Herbaceous indicators Nb, Nt	
begomovirus	,	
Potato yellow vein crinivirus	PCR <b>or</b> hybridisation	
Potato yellowing alfamovirus	ELISA or PCR	
Solanum apical leaf curling	Growing season inspection in PEQ for	
begomovirus	symptom expression	
Solanum yellows luteovirus	Growing season inspection in PEQ for	
	symptom expression	
Southern potato latent carlavirus	Growing season inspection in PEQ for	
F	symptom expression	
Sowbane mosaic sobemovirus	Herbaceous indicators Cq, Ca	
Tobacco necrosis necrovirus	Herbaceous indicators Ca, Cq, Nc	Tobacco necrosis virus A
[strains not in New Zealand]	2	Tobacco necrosis virus B
Tobacco rattle tobravirus [strains	PCR AND herbaceous indicators Ca, No	Serological detection is
not in New Zealand]	2 011 12 12 12 130 000 000 1100 000 000 000	unreliable because of diversity in the particle proteins of different isolates.
Tobacco streak ilarvirus [strains not in New Zealand]	Herbaceous indicators Nt	Potato strain SB10 infects potato naturally.
Tomato infectious chlorosis	PCR	
crinivirus		
Tomato leaf curl begomovirus – New Delhi	Herbaceous indicators Nb	Potato leaf curl is a new disease in northern India caused by a strain of Tomato leaf curl new Delhi virus.

ORGANISM TYPES	ACCEPTABLE METHODS	Comments
	(See Note 6 at the end of this table).	
Tomato yellow leaf curl	PCR or ELISA	
begomovirus		
Tomato yellow mosaic	PCR or ELISA AND herbaceous	
begomovirus	indicators Nb, Nt	
Wild potato mosaic potyvirus	Herbaceous indicators Nc, No	
Phytoplasmas		
Eggplant little leaf phytoplasma	Nested or real-time PCR using universal phytoplasma primers	
Potato marginal flavescence	Nested or real-time PCR using universal phytoplasma primers	
Potato phyllody phytoplasma	Nested or real-time PCR using universal phytoplasma primers	
Potato purple-top roll	Nested or real-time PCR using universal	
phytoplasma	phytoplasma primers	
Potato purple-top wilt	Nested or real-time PCR using universal	
phytoplasma	phytoplasma primers	
Potato round leaf phytoplasma	Nested or real-time PCR using universal phytoplasma primers	
Potato stolbur phytoplasma	Nested or real-time PCR using universal phytoplasma primers	
Potato witches' broom	Nested or real-time PCR using universal	
phytoplasma	phytoplasma primers	
Saq'O disease	Growing season inspection in PEQ for	An unknown phytoplasma and a
	symptom expression	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.

ORGANISM TYPES	Comments
Columnea latent viroid*	No evidence that this viroid infects potato
	naturally.
Pepper chat fruit 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 et al. 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.

A : *	
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.
Cherry leaf roll nepovirus*	Tests that would detect this virus are already
	being conducted elsewhere in this schedule, e.g.
	the herbaceous indicators Nc and Nt.
Eggplant mosaic tymovirus*	Tests that would detect this virus are already
Eggplant mosaic tymovirus	
	being conducted elsewhere in this schedule, e.g.
TT 1	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.
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.
Pepper veinal mottle potyvirus*	Tests that would detect this virus are already
- off or version resource benefit	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
1 obacco cicli potyvirus	being conducted elsewhere in this schedule, e.g.
	the indicators Cq and Ca.
Tobacco necrotic dwarf luteovirus*	
Tobacco stunt varicosavirus*	No appropriate test available.
1 obacco 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
Î Î	being conducted elsewhere in this schedule, e.g.
	the indicator Cq.
Tomato yellow vein streak begomovirus*	Tests that would detect this virus are already
3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -	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
1 canat witches broom	already being conducted elsewhere in this
	schedule, e.g. the universal PCR for
	phytoplasma.

#### **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. Plantlets in growth medium must be de-flasked and grown in quarantine for virus disease testing. After plantlets are deflasked they must be grown in sterile potting mix. Testing must be carried out on plants while they are still in active growth prior to tuber formation.
- 3. Herbaceous indicator hosts (Cq Chenopodium quinoa, Nd Nicotiana denneyii, No Nicotiana occidentalis P1 and Nt Nicotiana tabacum (cv White Burley)): at least two plants of each herbaceous indicator species must be used in each test. Herbaceous indicator hosts (Ca Chenopodium amaranticolour, Nb Nicotiana benthamiana and Nc Nicotiana clevelandii: at least four plants of each herbaceous indicator species must be used in each test.
- 4. For herbaceous indexing 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). For the PSTVd PCR young actively growing leaf tissue must be used.
- 5. 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. A suitable positive control must be included.
- 6. 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.
- 7. All PCR, hybridisation 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.
- 8. Inspect *Solanum tuberosum* plants for signs of pest and disease at least once per week. Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection
- 9. With prior notification, MPI will accept other internationally recognised testing methods.

# **Declaration Form**

# To be completed and signed by the exporter and importer.

As defined by the New Zealand HSNO Act 1996, Genetically modified organism means, unless expressly provided otherwise by regulations, any organism in which any of the genes or any other genetic material (a) have been modified by in vitro techniques; or (b) 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.

from any genes of other genetic material which has been modified by in vitro techniques.
Note that under the Hazardous Substances and New Organisms (HSNO) Act 1996. The import and release of any genetically modified crop without approval from the Environmental Protection Authority (EPA) it is unlawful.
I,(exporter's name and address)
I undertake to inform immediately the importer and the Ministry for Primary Industries, MPI, New Zealand of any information that can undermine the accuracy of this declaration.
Note that MPI may request evidence as to how production, handling and transport of these seeds is performed in the field, or require and audit as a way to provide quality to the production system.
I, (importer's name and address)
Signed by (exporter) and Company Name and details
(print name)
Date
Signed by (importer) and Company Name and details
(print name)
Warning: Any person who knowingly makes a statement of information or a declaration that is false or misleading

in a material particular may on summary conviction, be sentenced to a term of imprisonment and/or fined not exceeding \$500,000.00

**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

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- b. Additional declaration: "Aster yellows phytoplasma is not known to occur in \_\_\_\_ (the country or state where the plants were grown) \_\_\_\_".2.

#### **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 viruslike 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 *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: PEO:** Level 1

**Minimum Period:** 3 months

Cleanliness: Bulbs (corms) must be free of leafy coverings.

C. For Dormant Bulbs from Countries <u>other than</u> 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 for Primary Industries (MPI) 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 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 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.

#### **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

#### **PEO**: 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 MPI 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 for Primary Industries (MPI) 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) <u>Post-entry quarantine</u>

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 for Primary Industries (MPI) 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* 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 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 nematodeParatrichodorus teresstubby root nematodeTrichodorus similisstubby 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 tuliparumbasal rotSclerotium perniciosumsmoulderSclerotium wakkeriblackleg

**Bacterium** 

Corynebacteriaceae

Curtobacterium flaccumfaciens pv. oortii yellow pock

Virus

Cymbidium ringspot virus	-
Tobacco rattle virus [strains not in New Zealand]	-
Tomato bushy stunt virus	-
Tomato ringspot virus	-
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: Ceratocystis fimbriata; Elm mosaic virus, Elm phloem necrosis;

Phellinus noxius; 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 *Ceratocystis fimbriata* (section 2.2.1.8)

- b. Conditions for *Phytophthora ramorum* (section 2.2.1.11)
- c. Conditions for *Xylella fastidiosa* (section 2.2.1.12) **Guidance for importers**: The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa*
- d. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note**: Only applies to the following species: *Ulmus parvifolia*

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

**PEO**: 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 MPI-accredited facilities in any country

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. The operator of the accredited facility must also have an agreement with MPI 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 MPI 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 MPI and the [name of the MPI-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 MPI and the [name of the MPI-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) <u>Post-entry quarantine</u>

**PEQ**: All *Vaccinium* nursery stock must be imported under permit into post-entry quarantine in a level 2 quarantine facility accredited to 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) <u>Documentation</u>

**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 MPI 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 preshipment 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 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 magdalensis sharpnosed leafhopper

Hymenoptera

Tenthredinidae

Caliroa annulipes sawfly

Neopareophora lituragooseberry sawflyPristiphora idiotawillow redgall sawfly

Pristiphora mollis -

Lepidoptera

Arctiidae

Hyphantria cunea fall webworm

Geometridae

Itame ribearia currant spanworm

Noctuidae

Acronicta tritonaacronicta caterpillarActebia fennicablack 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 trialbamaculella leaftier

Cheimophila salicella European carnation tortrix

Choristoneura hebenstreitella tortricid

Choristoneura rosaceana oblique-banded leafroller

Cydia packardi cherry fruitworm

leaftier Dichomeris vacciniella

Hendecaneura shawiana blueberry tip borer Spilonota ocellana eyespotted bud moth

**Thysanoptera Thripidae** 

> Catinathrips similis thrips Catinathrips vaccinicola thrips Frankliniella bispinosa flower thrips Frankliniella tritici eastern flower thrips Frankliniella vaccinii blueberry thrips

Scirtothrips ruthveni Taeniothrips vaccinophilus thrips

Mite

Arachnida Acarina

Eriophyidae

Acalitus vaccinii blueberry bud mite

**Fungus** 

Ascomycota

**Diaporthales** Valsaceae

> Diaporthe vaccinii (anamorph Phomopsis vaccinii) twig blight

**Dothideales** 

Botryosphaeriaceae

Botryosphaeria corticis cane blight

Botryosphaeria vaccinii (anamorph Phyllosticta

elongata)

Polystomellaceae

Dothidella vacciniicola twig canker

**Ervsiphales** Ervsiphaceae

> Microsphaera vaccinii powdery mildew

Hypocreales Hypocreaceae

> Calonectria ilicicola (anamorph Cylindrocladium root and stem rot

crotalariae)

Leotiales Leotiaceae

Godronia cassandrae (anamorph Fusicoccum

foliage spot

putrefaciens)

Godronia cassandrae f. sp. vaccinii cane canker

Sclerotiniaceae

Monilinia baccarum mummy berry Monilinia fructigena (anamorph Monilia fructigena) European brown rot

Monilinia ledi twig blight

Monilinia megalospora

Monilinia oxycocci

Monilinia urnula brown rot Monilinia vaccinii-corymbosi brown rot

**Phyllachorales** Phyllachoraceae

> Ophiodothella vaccinii fly speck leaf spot

**Meliolales** 

Meliolaceae

black mildew Asteridiella exilis

Rhytismatales Rhytismataceae

Lophodermium hypophyllum

Lophodermium maculare leaf spot Rhytisma vaccinii tar leaf spot **Basidiomycota: Basidiomycetes Agaricales** Tricholomataceae Armillaria mellea (anamorph Rhizomorpha armillaria root rot *subcorticalis*) armillaria root rot Armillaria ostoyae **Basidiomycota: Teliomycetes Uredinales** Pucciniastraceae Pucciniastrum goeppertianum rust **Oomycota Pythiales Pythiaceae** Phytophthora ramorum sudden oak death disease mitosporic fungi (Coelomycetes) **Sphaeropsidales** Sphaerioidaceae Dothichiza caroliniana double leaf spot Coniothyrium vaccinicola brand canker stem blight Phoma vaccinii Piggotia vaccinii leaf spot Septoria albopunctata septoria spot Septoria vaccinii septoria spot unknown Coelomycetes unknown Coelomycetes Gloeosporium minus leaf spot and stem canker Leptothyrium conspicuum fly speck mitosporic fungi (Hyphomycetes) Hyphomycetales Moniliaceae Gloeocercospora inconspicua leaf spot Ramularia vaccinii leaf spot unknown Hyphomycetes unknown Hyphomycetes Aureobasidium vaccinii twig and leaf blight **Bacterium** Pseudomonadaceae Xylella fastidiosa Pierce's disease Rhizobiaceae Agrobacterium rubi cane gall Virus Blueberry leaf mottle virus Bluberry red ringspot virus (syn. Cranberry ringspot virus) Blueberry scorch virus Blueberry shock virus

Blueberry shoestring virus Peach rosette mosaic virus Tobacco streak virus [strains not in New Zealand] Tomato ringspot virus Phytoplasma Blueberry stunt phytoplasma Cranberry false blossom phytoplasma Vaccinium witches' broom phytoplasma Disease of unknown aetiology Blueberry fruit drop disease

Ministry for Primary Industries Import Health Standard 155.02.06: Importation of Nursery Stock

# Inspection, Testing and Treatment Requirements for Vaccinium

ORGANISM TYPES	MPI-ACCEPTED METHODS (See notes below)		
Insects	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions)		
Mite	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions)		
Fungi	Growing season inspection in PEQ for disease symptom expression.		
Bacterium			
Agrobacterium rubi	Growing season inspection in PEQ for disease symptom expression.		
Xylella fastidiosa	Growing season inspection in PEQ for disease symptom expression AND PCR		
Virus			
Blueberry leaf mottle virus	Herbaceous indicators Cq and Nc AND ELISA or PCR		
Bluberry red ringspot virus (syn.	ELISA or PCR		
Cranberry ringspot virus)			
Blueberry scorch virus	Herbaceous indicator Cq AND ELISA or PCR		
Blueberry shock virus	Herbaceous indicators Nc and Nt AND ELISA or PCR		
Blueberry shoestring virus	ELISA or PCR		
Peach rosette mosaic virus	Herbaceous indicators Cq and Nt AND ELISA or PCR		
Tobacco streak virus [strains not in New Zealand]	Herbaceous indicators Cq and Nt AND ELISA or PCR		
Tomato ringspot virus	Herbaceous indicators Cq and Nt AND ELISA or PCR		
Phytoplasmas			
Blueberry stunt phytoplasma	Nested PCR or real time PCR using universal phytoplasma primers.		
Cranberry false blossom	Nested PCR or real time PCR using universal phytoplasma primers.		
phytoplasma			
Vaccinium witches' broom	Nested PCR or real time PCR using universal phytoplasma primers.		
phytoplasma			
Disease of unknown aetiology			
Blue berry fruit drop disease	Growing season inspection in PEQ for disease symptom expression.		

## **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. 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.
- 3. Virus testing (herbaceous indexing, ELISA and PCR) must be carried out in the spring or under spring-like conditions using the new flush of growth. Bacteria and phytoplasma testing (PCR) must be carried out at the end of the summer or under summer-like conditions.
- 4. Vaccinium plants must 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.
- 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, MPI will accept other internationally recognised testing methods.

**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.

- Type of *Vaccinium macrocarpon* nursery stock approved for entry into New Zealand Cuttings (dormant); Plants in tissue culture
- Pests of Vaccinium macrocarpon

Refer to the pest list.

• Entry conditions for:

# 3.1 *Vaccinium macrocarpon* cuttings and tissue culture from offshore MPI-accredited facilities in any country

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. The operator of the accredited facility must also have an agreement with MPI on the phytosanitary measures to be undertaken for *Vaccinium macrocarpon*. Refer to the "*Vaccinium macrocarpon* Inspection, Testing and Treatment Requirements".

## (i) <u>Documentation</u>

**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 MPI 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 MPI and the [name of the MPI-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 MPI and the [name of the MPI-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) <u>Post-entry quarantine</u>

**PEQ**: All *Vaccinium macrocarpon* nursery stock must be imported under permit into postentry quarantine in a level 2 quarantine facility accredited to 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 MPI 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 postentry quarantine in a level 3 quarantine facility accredited to 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 tritonaacronicta caterpillarActebia fennicablack army cutworm

**Pvralidae** 

Acrobasis vaccinii cranberry fruitworm

Tortricidae

Archips rosanusrose leafrollerArgyrotaenia velutinanared-banded leafroller

Aroga trialbamaculella leaftier Choristoneura hebenstreitella tortricid

Choristoneura rosaceana oblique-banded leafroller

Dichomeris vacciniella leaftier

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

Botryosphaeria vaccinii (anamorph Phyllosticta

elongata)

Erysiphales

Erysiphaceae

Microsphaera vaccinii powdery mildew

Leotiales

Leotiaceae

Godronia cassandrae (anamorph Fusicoccum foliage spot

putrefaciens)

Godronia cassandrae f. sp. vaccinii cane canker

Sclerotiniaceae

Monilinia fructigena (anamorph Monilia fructigena) European brown rot

Monilinia oxycocci

Rhytismatales Rhytismataceae

Lophodermium hypophyllum

Lophodermium maculare leaf spot

Lophodermium oxycocci -

**Basidiomycota: Basidiomycetes** 

**Agaricales** 

Tricholomataceae

Armillaria mellea (anamorph Rhizomorpha armillaria root rot

subcorticalis)

**Basidiomycota: Teliomycetes** 

**Uredinales** 

Pucciniastraceae

Pucciniastrum goeppertianum rust

Chytridiomycota Chytridiales Synchytriaceae

Synchytrium vaccinii red leaf gall

Mitosporic fungi (Coelomycetes)

Sphaeropsidales Sphaerioidaceae

Coniothyrium vaccinicolabrand cankerPhoma vacciniistem blightSeptoria vacciniiseptoria spotStrasseria oxycoccifruit rot

unknown Coelomycetes unknown Coelomycetes

Gloeosporium minus leaf spot and stem canker

Leptothyrium conspicuum fly speck

Oomycota Pythiales Pythiaceae

Phytophthora ramorum Sudden Oak Death disease

**Bacterium** 

Rhizobiaceae

Agrobacterium rubi cane gall

Virus

Blueberry scorch virus

Bluberry red ringspot virus (syn. Cranberry ringspot

virus)

Tobacco streak virus [strains not in New Zealand]

Phytoplasma

Cranberry false blossom phytoplasma -

# Inspection, Testing and Treatment Requirements for *Vaccinium macrocarpon*

ORGANISM TYPES	MPI-ACCEPTED METHODS (See notes below)
Insects	Visual inspection AND approved insecticide treatments (Refer to section 2.2.1.6 of the basic conditions)
Mite	Visual inspection AND approved miticide treatments (Refer to section 2.2.1.6 of the basic conditions)
Fungi	Growing season inspection in PEQ for disease symptom expression.
Bacterium	
Agrobacterium rubi	Growing season inspection in PEQ for disease symptom expression.
Virus	
Blueberry scorch virus	Herbaceous indicator Cq AND ELISA or PCR.
Blueberry red ringspot virus (syn. Cranberry ringspot virus)	ELISA or PCR.
Tobacco streak virus [strains not in New Zealand]	Herbaceous indicators Cq and Nt AND ELISA or PCR.
Phytoplasmas	
Cranberry false blossom phytoplasma	Nested PCR or real time PCR using universal phytoplasma primers.

### **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. 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.
- 3. Virus testing (herbaceous indexing, ELISA and PCR) must be carried out in the spring or under spring-like conditions using the new flush of growth. Bacteria and phytoplasma testing (PCR) must be carried out at the end of the summer or under summer-like conditions.
- 4. Vaccinium plants must 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.
- 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, MPI will accept other internationally recognised testing methods.

**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; 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 2.2.1.12) **Guidance for importers:** The minimum quarantine period will be <u>6 months</u> for nursery stock sourced from countries <u>not</u> recognised by MPI as free from *Xylella fastidiosa* 

- b. Conditions for Uredinales: Additional declaration: "Rust diseases are not known to occur on \_ (the imported genus) \_ in \_ (the country in which the plants were grown) \_".
- c. Conditions for *Tetranychus kanzawai:* 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 *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	Α.	For	Cuttings	and	Whole	<b>Plants</b>
----------------------------------	----	-----	----------	-----	-------	---------------

**PEO:** 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 2.2.1.11)

## **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.

# 1. 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 MPI-accredited facilities, or into Level 3 post entry quarantine from non-accredited facilities.

## 2. Pests of Vitis

Refer to the pest list.

# 3. Entry conditions for:

# 3.1 Vitis cuttings and tissue cultures from offshore MPI-accredited facilities in any country

An offshore accredited facility is a facility that has been accredited to the Standard PIT.OS.TRA.ACPQF to undertake phytosanitary activities. For *Vitis*, the accredited facility operator must also have an agreement with MPI 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 MPI 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 MPI and the [name of the MPI-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 MPI and the [name of the MPI-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**

- sourced from mother plants which are at least 10 year old and have been inspected during the growing season and are free from symptoms of Syrah decline.

#### 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 (or level 3 quarantine facility at the direction of the CTO) accredited to 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 in post-entry quarantine and will be inspected, treated and/or audit-tested for regulated pests, at the expense of the importer. The minimum quarantine period will be:

- 6 months for plants in tissue culture and cuttings sourced from mother plants that have been kept in insect-proof plant houses (which may be extended to a minimum of 16 months at the direction of the CTO); or
- 16 months (which may be reduced to a minimum of 9 months at the discretion of the CTO) for cuttings sourced directly from open ground mother plants.

  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 MPI 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 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 of the phytosanitary certificate and by providing the following additional declarations to the phytosanitary certificate:

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

- sourced from mother plants which are at least 10 year old and have been inspected during the growing season and are free from symptoms of Syrah decline.

# (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 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 active growth 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

Amphicerus bicaudatus apple twig borer Amphicerus bimaculatus bostrichid beetle

Amphicerus cornutus Apate congener -

Apate monachus black borer
Bostrychopsis jesuita large auger beetle

Dexicrates robustus -

Melalgus confertus branch and twig borer

Micrapate scabrata Neoterius mistax Psoa quadrisignata -

Schistocerus bimaculatusgrape cane borerScobicia declivislead cable borerXylopertha retusawood boring beetle

Xylopsocus gibbicollis

Buprestidae

Agrilus marginicollis flatheaded grape borer

Carabidae

Adoxus obscurus [Animals Biosecurity] -

Cerambycidae

Acalolepta vastator -

Cerasphorus albofasciatus grape trunk borer

Chrysomelidae

Altica chalybaea grape flea beetle
Altica torquata grapevine flea beetle
Bromius obscurus western grape rootworm
Fidia viticida grape root worm

Glyptoscelis squamulata grape bud beetle Haltica spp. -

nanca spp. -

Monolepta australis red-shouldered leaf beetle

Coccinellidae

Coccinella transversoguttata [Animals Biosecurity]

Midas pygmaeus [Animals Biosecurity]

Nephus reunioni [Animals Biosecurity]

Rhyzobius ruficollis [Animals Biosecurity]

Stethorus spp. [Animals Biosecurity]

Curculionidae

Bustomus setulosusbrown weevilCraponius inaequalisgrape curculioDischista cincnaflower beetleEremnus atratusblack weevil

Eremnus cerealis western province grain worm

Eremnus setulosusgrey weevilNaupactus xanthographusfruit tree weevilOrthorhinus cylindrirostriselephant weevil

Orthorhinus klugi immigrant acacia weevil

Otiorhynchus cribricollis cribrate weevil

Perperus spp. apple root weevils

Platyaspistes glaucus Platyaspistes venustus Rhigopsis effracta -

Tanyrhynchus carinatus bud nibbler

Elateridae

Limonius canus Pacific Coast wireworm

Meloidae

Mylabris oculata -

Scarabaeidae

Athlia rustica Cotalpa ursina Hoplia callipyge Hoplia pubicollis -

Macrodactylus subspinosusrose chaferPachnoda sinuatascarab beetlePopillia japonicaJapanese beetleSchizonycha sp.cockchafer

Scolytidae

Scolytus japonicusJapanese bark beetleXyleborus disparambrosia beetleXyleborus semiopacusblack twig borer

Staphylinidae

Oligota pygmaea [Animals Biosecurity] -

Tenebrionidae

Blapstinus sp. darkling beetle

Coniontis parviceps Metoponium abnorme -

Diptera

Cecidomyiidae

Diadiplosis koebelei -

**Tachinidae** 

Ollacheryphe aenea [Animals Biosecurity] Sturmia harrisinae [Animals Biosecurity] Voriella uniseta [Animals Biosecurity] -

Hemiptera

Anthocoridae

Orius sp. [Animals Biosecurity] -

Coreidae

Anthocoris sp. -

Mictis profana crusader bug

Lygaeidae

Nysius raphanusfalse chinch bugNysius vinitorRutherglen bugOxycarenus arctatuscoon bug

Miridae

Creontiades dilutus green mirid

Pentatomidae

Euschistus conspersus stink bug

Oechalia schellenbergi [Animals Biosecurity] Schellenberg's soldier bug

Pyrrhocoridae

Dindymus versicolor harlequin bug

Homoptera

Aleyrodidae

Aleurocanthus woglumi citrus blackfly

Tetraleurodes vittatus -

Trialeurodes vittata grape whitefly

Aphididae

Aphis illinoisensis grapevine aphid

Aphis medicaginis -

Asterolecaniidae

Asterolecanium pustulans oleander pit scale

Cerococcidae

Asterococcus muratae pit scale

Cicadellidae

Acia lineatifrons leafhopper

Carneocephala fulgida red-headed sharpshooter

Carneocephala fulgida [vector] Dikrella cockerellii

Draeculacephala minerva

Draeculacephala minerva [vector]

Empoasca sp. Erythroneura comes Erythroneura elegantula Erythroneura variabilis

Erythroneura ziczac

Graphocephala atropunctata

Graphocephala atropunctata [vector]

Hordnia circellata

Scaphoideus titanus [vector]

Cicadidae

Platypedia minor Tettigades chilensis

Coccidae

Ceroplastes rusci Eulecanium cerasorum Eulecanium pruinosum Heliococcus bohemicus

Parthenolecanium persicae

Pulvinaria betulae

Pulvinaria innumerabilis

Pulvinaria vitis Diaspididae

> Aonidiella inornata Chrysomphalus aonidum Diaspidiotus uvae Oceanspidiotus spinosus

Parlatoria cinerea Parlatoria oleae

Pinnaspis strachani Pseudaonidia trilobitiformis Pseudaulacaspis pentagona Quadraspidiotus juglansregiae

Selenaspidus articulatus

Margarodidae

Eurhizococcus brasiliensis Icerya seychellarum Margarodes capensis Margarodes greeni

Margarodes meridionalis

Margarodes prieskaensis Margarodes trimeni

Margarodes vitis

Margarodes vredendalensis

Membracidae

Ceresa bubalus

Spissistilus bisonia

Spissistilus festinus

Phylloxeridae

Viteus vitifoliae [strain]

Pseudococcidae

Maconellicoccus hirsutus

Planococcus ficus

Pseudococcus capensis

Pseudococcus maritimus Rhizoecus kondonis

Hymenoptera **Aphelinidae** 

Coccophagus caridei [Animals Biosecurity]

red-headed sharpshooter blackberry leafhopper green sharpshooter green sharpshooter

green leafhopper eastern grape leafhopper western grape leafhopper

variegated grape leafhopper

leafhopper

blue-green sharpshooter

raspberry leafhopper

fig wax scale calico scale frosted scale

scale

European peach scale

scale

cottony maple scale

woolly vine scale

inornate scale Florida red scale grape scale armoured scale chaff scale olive scale

hibiscus snow scale trilobite scale white peach scale walnut scale

West Indian red scale

margarodid Seychelles scale

Seychelles fluted scale

soft scale

margarodid margarodid

margarodid

tree hopper

three-cornered alfalfa hopper

grape phylloxera

pink hibiscus mealybug

fig mealybug

grape mealybug Kondo mealybug

Ministry for Primary Industries Import Health Standard 155.02.06: Importation of Nursery Stock

Coccophagus gurneyi [Animals Biosecurity] Bethylidae Goniozus platynota [Animals Biosecurity] Braconidae Apanteles harrisinae [Animals Biosecurity] Bracon cushmani [Animals Biosecurity] Dolichogenidea tasmanica [Animals Biosecurity] Dryinidae Aphelopus albopictus [Animals Biosecurity] Encyrtidae Acerophagus notativentris [Animals Biosecurity] Anagyrus clauseni [Animals Biosecurity] Anagyrus fusciventris [Animals Biosecurity] Anagyrus pseudococci [Animals Biosecurity] Leptomastix dactylopii [Animals Biosecurity] parasitic wasp Metaphycus flavus [Animals Biosecurity] Pseudaphycus angelicus [Animals Biosecurity] Zarhopalus corvinus [Animals Biosecurity] Eulophidae Colpoclypeus florus [Animals Biosecurity] Formicidae black ant Anoplolepis steingroeveri [Animals Biosecurity] Crematogaster peringueyi [Animals Biosecurity] cocktail ant Formica cinerea [Animals Biosecurity] ant Pogonomyrmex californica [Animals Biosecurity] California harvester ant Solenopsis xyloni [Animals Biosecurity] southern fire ant Veromessor pergandei [Animals Biosecurity] desert seed-harvester ant Ichneumonidae Campoplex capitator [Animals Biosecurity] Dicaelotus inflexus [Animals Biosecurity] Mvmaridae Anagrus epos [Animals Biosecurity] Pteromalidae Ophelosia charlesii [Animals Biosecurity] Pachyneuron sp. [Animals Biosecurity] Trichogrammatidae Trichogramma funiculatum [Animals Biosecurity] Trichogrammatomyia tortricis [Animals Biosecurity] Vespidae Polistes buysoni [Animals Biosecurity] Isoptera Kalotermitidae Cryptotermes brevis West Indian drywood termite Kalotermes flavicollis termite Kalotermes minor Neotermes chilensis termite Rhinotermitidae Coptotermes acinaciformis [official control] Australian subterranean termite Reticulitermes hesperus Termopsidae Porotermes quadricollis Lepidoptera Agaristidae Agarista agricola painted vine moth Heraclia superba grapevine zebra moth Arctiidae Estigmene acrea saltmarsh caterpillar Hyphantria cunea fall webworm Laora variabilis Spilosoma virginica yellow woollybear Turuptiana obliqua tiger moth

Cossidae

Coryphodema tristis quince trunk borer Zeuzera coffeae red coffee borer Heliozelidae

Antispila rivillei

Noctuidae

Achaea spp.fruit-piercing mothsAgrotis mundabrown cutwormAlabama argillaceacotton leafwormAnomis mesogonahibiscus looperAnomis spp.-

Calyptra spp.
Copitarsia consueta
Copitarsia consueta
Eudocima spp.
Euxoa messoria
Euxoa ochrogaster
fruit-piercing moths
darksided cutworm
redbacked cutworm

Euxodo ochrogasier Teduacked cutworiii Teduack

 Mythimna sp.

 Noctua fimbriata
 broad-bordered yellow underwing

 Noctua pronuba
 large yellow underwing

 Oraccia comp
 fruit nioning moths

Oraesia spp. fruit-piercing moths
Orthodes rufula cutworm

Peridroma margaritosa Peridroma saucia - variegated cutworm

Protorthodes rufula -

Serrodes spp. fruit-piercing moth

Sphingomorpha spp. Spodoptera littoralis cotton leafworm

Xestia c-nigrum spotted cutworm

Oecophoridae

Echiomima sp. 
Maroga melanostigma fruit tree borer

Psychidae

Gymnelema plebigena bagworm
Pterophoridae

Geina periscelidactylus -**Pyralidae** 

Desmia funeralisgrape leaf-folderEuzophera bigellaquince mothOstrinia nubilalisEuropean corn borer

Saturniidae

Hemileuca eglanterina brown day-moth

Healanhanna brown day-moth

Hyalophora cecropia cecropia moth
Sesiidae

Vitacea polistiformis grape root borer Sphingidae

Eumorpha achemon achemon sphinx
Hippotion celerio grapevine hawk moth
Hyles euphorbiae spurge hawk moth
Hyles lineata whitelined sphinx
Theretra capersis grapevine hawk moth

Hyles lineata whitelined sphinx
Theretra capensis grapevine hawk moth
Theretra oldenlandiae vine hawk moth

Tortricidae

Archips argyrospilusfruit tree leafrollerArgyrotaenia citranaorange tortrixArgyrotaenia ljungianagrey red-barred tortrix

Argyrotaenia ljungianagrey red-barred tortrixArgyrotaenia velutinanared-banded leafrollerCryptophlebia leucotretafalse codling moth

Endopiza viteana Eulia stalactitis -

Eupoecilia ambiguellavine mothLobesia botranagrape berry mothParalobesia viteanagrape berry moth

Platynota stultanaomnivorous leafrollerProeulia aurariagrapevine leafroller

Proeulia triqueta

Zygaenidae

Harrisina americana grapeleaf skeletonizer

Harrisina brillians western grapeleaf skeletonizer

Theresimima ampelophaga zygaenid butterfly

Neuroptera

Chrysopidae

Chrysopa oculata [Animals Biosecurity] Chrysopa spp. [Animals Biosecurity] -

Conioptervgidae

Cryptoscenea australiensis [Animals Biosecurity]

Hemerobiidae

Micromus sp. [Animals Biosecurity]

Orthoptera

Acrididae

Melanoplus femurrubrum red-legged grasshopper

Melanoplus mexicanus devastator -

Oedaleonotus enigma -

Phaulacridium vittatum wingless grasshopper

Schistocerca cancellata Schistocerca shoshone Schistocerca vaga -

Gryllidae

Acheta fulvipennis cricket Microgryllus pallipes cricket

Tettigoniidae

Caedicia spp. -

Plangia graminea grasshopper

Thysanoptera

Phlaeothripidae

Haplothrips victoriensis tubular black thrips

Thripidae

Caliothrips fasciatusbean thripDrepanothrips reuterigrape thripsFrankliniella cestrumtomato thripsFrankliniella minutaminute flower thrips

Frankliniella occidentalis [pesticide resistant strain] western flower thrips

Heliothrips sylvanusthripsRhipiphorothrips cruentatusleaf thripsScirtothrips citricitrus thrips

Scolothrips sexmaculatus [Animals Biosecurity] -

Unknown Insecta Unknown Insecta

Cryptolarynx vitis Dyctineis pulvinosus -

Mite

Arachnida

Acarina

Anvstidae

Anystis agilis [Animals Biosecurity]

Eriophyidae

Colomerus vitis [leaf curling strain] grape erineum mite Phyllocoptes vitis eriophyid mite

Phytoseiidae

Amblyseius victoriensis [Animals Biosecurity] Metaseiulus occidentalis [Animals Biosecurity] -

Neoseiulus chilenensis [Animals Biosecurity] predator mite

Typhlodromus doreenae [Animals Biosecurity] -

Tenuipalpidae

Brevipalpus chilensisfalse spider miteBrevipalpus lewisibunch miteBrevipalpus liliumfalse spider miteBrevipalpus obovatusprivet miteTenuipalpus granatifalse spider mite

Tetranychidae

Eotetranychus carpinitetranychid miteEotetranychus prunihickory scorch miteEotetranychus smithitetranychid miteEotetranychus viticolatetranychid miteEotetranychus willametteihazel miteEotetranychus yumensisYumi spider mite

Eotetranychus yumensisYumi spider miteEutetranychus orientalispear leaf blister miteOligonychus coffeaetea red spider miteOligonychus mangiferusmango spider miteOligonychus peruvianusspider mite

Oligonychus punicaeavocado brown miteOligonychus yothersiavocado red miteTetranychus kanzawaikanzawa miteTetranychus mcdanieliMcDaniel spider miteTetranychus pacificusPacific spider mite

Mollusc

Gastropoda

Stylommatophora

Helicidae

Cernuella virgata small banded snails
Cochlicella barbara small pointed garden snail

Theba pisana white Italian snail

**Fungus** 

Ascomycota Caliciales

**Unknown Caliciales** 

Roesleria pallida grape root rot

Diaporthales Valsaceae

Diaporthe rudis (anamorph Phomopsis rudis) phomopsis canker

Diaporti Dothideales

Mycosphaerellaceae

Guignardia bidwellii (anamorph Phyllosticta black rot

ampelicida)

Guignardia bidwellii f. sp. euvitis - Guignardia bidwellii f. sp. muscadinii -

Mycosphaerella angulata (anamorph Cercospora angular leaf spot

brachypus)
Schizothyriaceae

Schizothyrium pomi (anamorph Zygophiala jamaicensis) fly speck

Hypocreaceae Hypocreaceae

Cylindrocarpon destructans var. crassum root rot

Leotiales

Dermateaceae

Pseudopezicula tetraspora angular leaf scorch

Pseudopezicula tracheiphila rotbrenner

Sclerotiniaceae

Grovesinia pyramidalis (anamorph Cristulariella target spot

moricola)

Rhytismatales Rhytismataceae

Rhytisma vitis tar spot

Saccharomycetales

Saccharomycetaceae

Pichia membranaefaciens

**Unknown Ascomycota** 

Hyponectriaceae

Physalospora baccae -

Xylariales Xylariaceae

Anthostomella pullulans Brulure

**Basidiomycota: Agaricomycetes** 

Hymenochaetales Hymenochaetaceae

Phellinus noxius brown root rot

**Basidiomycota: Basidiomycetes** 

**Agaricales** 

Tricholomataceae

Armillaria mellea (anamorph Rhizomorpha armillaria root rot

subcortical is)

Armillaria sp. armillaria root rot Armillaria tabescens armillaria root rot

Ganodermatales Ganodermataceae

Ganoderma lucidum (anamorph Polyporus lucidus) wood rot

Ganoderma tsugae -

Poriales

Coriolaceae

Bjerkandera adusta white rot

Bjerkandera fumosa --

Lentinaceae

Pleurotus ostreatus wood decay

**Stereales** 

Stereaceae

Stereum sp. -

**Basidiomycota: Teliomycetes** 

Uredinales

**Unknown Uredinales** 

Physopella ampelopsidis grape rust

Mitosporic Fungi

Unknown Mitosporic Fungi Unknown Mitosporic Fungi

Phacellium sp. -

Mitosporic Fungi (Coelomycetes)

Sphaeropsidales Sphaerioidaceae

Ascochyta ampelina leaf spot Coniella diplodiella white rot

Coniella petrakii white rot
Phomopsis longiparaphysata phomopsis rot
Pyrenochaeta vitis leaf spot

Septoria ampelina septoria leaf spot

**Unknown Coelomycetes** 

**Unknown Coelomycetes** 

Nattrassia toruloidea leaf spot Pestalotia menezesiana fruit rot

Pestalotia pezizoidesfruit and leaf spotPestalotiopsis mangiferaegrey leaf spot of mango

Pestalotiopsis uvicola fruit rot

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales

Dematiaceae

Alternaria vitis leaf disease

Phaeoramularia dissiliens cercospora leaf spot

Moniliaceae

Cephalosporium sp. --

Penicillium aurantiogriseum penicillium rot

Verticillium heterocladum -

**Unknown Hyphomycetes** 

**Unknown Hyphomycetes** 

Briosia ampelophaga leaf blotch Candida krusei yeasty rot

Candida steatolytica [Animals Biosecurity] -

Oidium sp. powdery mildew

Paecilomyces farinosus Paecilomyces spp. Phaeoacremonium aleophilum Phaeoisariopsis sp. -

Stigmina vitis leaf fall

#### **Bacterium**

Pseudomonadaceae

Xanthomonas campestris pv. viticolabacterial cankerXylella fastidiosaPierce's diseaseXylophilus ampelinusbacterial blight

Rhizobiaceae

Agrobacterium rubi cane gall

Virus

Artichoke Italian latent virus Cherry leaf roll virus [strains not in New Zealand] Grapevine Ajinashika disease virus Grapevine Algerian latent virus Grapevine Anatolian ringspot virus Grapevine angular mosaic virus Grapevine berry inner necrosis virus Grapevine Bulgarian latent virus Grapevine chrome mosaic virus Grapevine deformation virus Grapevine fanleaf virus [strains not in New Zealand] Grapevine labile rod-shaped virus *Grapevine leafroll-associated virus* [type 7] Grapevine line pattern virus Grapevine pinot gris virus Grapevine red blotch-associated virus Grapevine stunt virus Grapevine Tunisian ringspot virus Grapevine virus D Peach rosette mosaic virus Petunia asteroid mosaic virus

Strawberry latent ringspot virus [strains not in New Zealand]

Tomato ringspot virus

Raspberry ringspot virus Sowbane mosaic virus

Viroid

Australian grapevine viroid - Grapevine yellow speckle viroid 2 -

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)

Diseases of unknown aetiology
Grapevine vein clearing
LN33 stem grooving Syrah decline

# Inspection, Testing and Treatment Requirements for Vitis

ORGANISM TYPES	MPI-ACCEPTED METHODS (See notes below)
Insects	Visual inspection AND approved insecticide treatments (Refer to section
	2.2.1.5 of the basic conditions) [cuttings only]
Mites	Visual inspection AND approved miticide treatments (Refer to section
1/2400	2.2.1.5 of the basic conditions) [cuttings only] or binocular microscope
	inspection in PEQ [plants in tissue culture only]
Fungi	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes upon
- <del></del>	arrival in the post entry quarantine facility.
	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
Bacterium	All cuttings must be dipped in 1% sodium hypochlorite for 2 minutes upon
Bacterium	arrival in the post entry quarantine facility.
Agrobacterium rubi	Growing season inspection in PEQ for disease symptom expression AND
11groodeterium ruoi	Hot water treatment (Refer to "Approved Treatments for Vitis")
Xanthomonas campestris pv.	Growing season inspection in PEQ for disease symptom expression AND
viticola	Hot water treatment (Refer to "Approved Treatments for <i>Vitis</i> ")
Xilophilus ampelinus	Growing season inspection in PEQ for disease symptom expression AND
Zuopiums umpeumus	Hot water treatment (Refer to "Approved Treatments for <i>Vitis</i> ")
Xylella fastidiosa	Growing season inspection in PEQ for disease symptom expression AND
zzywia jasuawsa	PCR (two sets, samples to be collected at least four weeks apart) AND Hot
	water treatment (Refer to "Approved Treatments for Vitis")
Virus	The state of the s
Artichoke Italian latent virus	Growing season inspection in PEQ for disease symptom expression
Cherry leaf roll virus [strains	ELISA or PCR AND herbaceous indicators (Ca, Cq, Cs and Nt)
not in New Zealand]	ELISA OF FCK AND Herbaceous indicators (Ca, Cq, Cs and Nt)
Grapevine Ajinashika disease	Growing season inspection in PEQ for disease symptom expression
virus	Growing season inspection in FEQ for disease symptom expression
Grapevine Algerian latent virus	Growing season inspection in PEQ for disease symptom expression
Grapevine Anatolian ringspot	Growing season inspection in PEQ for disease symptom expression
virus	Growing season inspection in FEQ for disease symptom expression
Grapevine angular mosaic	Growing season inspection in PEQ for disease symptom expression
virus	Growing season inspection in LEQ for disease symptom expression
Grapevine berry inner necrosis	Growing season inspection in PEQ for disease symptom expression
virus	Stowing season inspection in 12Q for disease symptom expression
Grapevine Bulgarian latent	Herbaceous indicators (Ca and Cq)
virus	Tierbaccous indicators (cu and eq)
Grapevine chrome mosaic virus	Herbaceous indicators (Ca, Cq, Cs and Nt)
Grapevine deformation virus	Herbaceous indicators (Ca and Cq)
Grapevine fanleaf virus [strains	ELISA or PCR AND herbaceous indicators (Ca, Cq, and Cs)
not in New Zealand]	(Su, Sq, und Ss)
Grapevine labile rod-shaped	Growing season inspection in PEQ for disease symptom expression
virus	Same all the second subsection
Grapevine leafroll-associated	PCR
virus [type 7]	
Grapevine line pattern virus	Growing season inspection in PEQ for disease symptom expression
Grapevine pinot gris virus	PCR
Grapevine red blotch-	PCR
associated virus	
Grapevine stunt virus	Growing season inspection in PEQ for disease symptom expression
Grapevine Tunisian ringspot	Growing season inspection in PEQ for disease symptom expression
virus	Sample of the sa
Grapevine virus D	PCR
Peach rosette mosaic virus	ELISA or PCR AND herbaceous indicators (Ca, Cq, Cs and Nt)
Petunia asteroid mosaic virus	PCR or ELISA
Raspberry ringspot virus	ELISA or PCR AND herbaceous indicators (Ca, Cq, Cs and Nt)
Sowbane mosaic virus	Herbaceous indicators (Ca and Cq)
SONDUME HOSUIC VII US	Tieroaccous maicators (Ca and Cq)

Strawberry latent ringspot virus [strains not in New Zealand]	PCR AND herbaceous indicators (Ca, Cq and Cs)		
Tomato ringspot virus	ELISA or PCR AND herbaceous indicators (Ca and Cq)		
Viroids	Growing season inspection in PEQ for disease symptom expression		
Phytoplasmas	Plants derived from cuttings: Nested PCR or real-time PCR using universal phytoplasma primers AND Hot water treatment (Refer to "Approved Treatments for <i>Vitis</i> ")  Plants derived from tissue cultures: Nested PCR or real-time PCR using universal phytoplasma primers (two sets, samples to be collected at least four weeks apart)		
Disease of unknown aetiology			
Grapevine vein clearing	Growing season inspection in PEQ for disease symptom expression		
LN33 stem grooving	Woody indexing or green indexing (LN33)		
Syrah decline	Additional declaration endorsed on the phytosanitary certificate, refer to section 3.1 (iii) for offshore MPI-accredited facilities or 3.2 (iii) for non-accredited facilities.		

### **Notes:**

- 1. The unit for testing is defined in section 2.3.2.1.
- 2. Herbaceous indicator hosts (**Ca** Chenopodium amaranticolor, **Cq** Chenopodium quinoa, **Cs** Cucumis sativus and **Nt** Nicotiana tabacum): 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 or green indexing: at least two plants of each woody/green indicator must be used in each test. All woody indicators are to be inoculated by double budding while green indicators are top grafted. A suitable positive control must be included.
- 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, MPI will accept other internationally recognised testing methods.

# **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 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) <u>Documentation</u>

**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 for Primary Industries (MPI) 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 MPI 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) <u>Post-entry quarantine</u>

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** 

Botryosphaeria spp.

Oomycota Pythiales

Pythiaceae

Phytophthora cinnamomi black rot

Arbuscular mychorrhizae

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: **BORIC** 

If the organism is not identified or categorised within the register, please contact <u>plantimports@mpi.govt.nz</u>

**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 (MPI) 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 (MPI) 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

peanut root knot nematode Meloidogyne arenaria

**Fungus** 

**Basidiomycota: Basidiomycetes** 

**Agaricales** 

Tricholomataceae

Armillaria mellea (anamorph Rhizomorpha armillaria root rot

subcorticalis)

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."