Risk Management Proposal for management of Phellinus noxius in nursery stock hosts (whole plants, including rooted cuttings) from all countries

For Public Consultation

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## **Submissions**

The Ministry for Primary Industries (MPI) invites comment from interested parties on the proposed amendment to import health standard (IHS) 155.02.06: Importation of Nursery Stock, which is supported by this risk management proposal.

An IHS "specifies requirements to be met for the effective management of risks associated with importing risk goods, including risks arising because importing the goods involves or might involve an incidentally imported new organism" (Section 22(1) Biosecurity Act 1993).

MPI therefore seeks comment on the proposed amendments to the requirements in the IHS 155.02.06: Importation of Nursery Stock. Submitters may also like to comment separately on other aspects of the IHS and MPI will respond to these in due course.

The following points may be of assistance in preparing comments:

- Wherever possible, comments should be specific to a particular change in IHS requirements or a question asked in this document (referencing section numbers or commodity names as applicable).
- Where possible, reasons, data and supporting published references to support comments are requested.
- The use of examples to illustrate particular points is encouraged.

MPI encourages respondents to forward comments electronically. Please include the following in your submission:

- The title of the consultation document in the subject line of your email;
- Your name and title (if applicable);
- Your organisation's name (if applicable); and
- Your address.

Send submissions to: plantimports@mpi.govt.nz.

However, should you wish to forward submissions in writing, please send them to the following address to arrive by close of business on 19<sup>th</sup> August 2016.

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Submissions received by the closure date will be considered during the development of the final IHS. Submissions received after the closure date may be held on file for consideration when the issued IHS is next revised/ reviewed.

## Official Information Act 1982

Please note that your submission is public information and it is MPI policy to publish submissions and the review of submissions on the MPI website. Submissions may also be the subject of requests for information under the Official Information Act 1982 (OIA).

The OIA specifies that information is to be made available to requesters unless there are sufficient grounds for withholding it, as set out in the OIA. Submitters may wish to indicate grounds for withholding specific information contained in their submission, such as the information is commercially sensitive or they wish personal information to be withheld.

Any decision to withhold information requested under the OIA is reviewable by the Ombudsman.

## **Purpose**

- (1) The purpose of this risk management proposal (RMP) is to:
  - a) summarise biosecurity risk of *Phellinus noxius* associated with nursery stock;
  - b) propose measures for the effective management of this risk; and
  - c) seek stakeholder feedback on the proposed management options and import requirements as outlined in <u>Appendix 2: Proposed Measures in IHS 155.02.06</u>.

## **Background**

- (2) *Phellinus noxius* (syn. *Fomes noxius*), causes 'brown root rot disease' and is a fungal pathogen found on the roots of trees in countries with tropical and subtropical climates; including Africa, Caribbean, Central America, Japan, Oceania and Southeast Asia (Appendix 1, Table 4).
- (3) *P. noxius* has a wide host range affecting 200 trees and plant species in 59 different plant families (Ann et al., 2002), including avocados (*Persea americana*), grapes (Vitis), pears (Pyrus) and eucalyptus.
- (4) P. noxius is not known to be present in New Zealand and is a regulated organism.
- (5) Avocados New Zealand notified MPI in 2010 of their concerns about the persistent establishment of *P. noxius* in avocado orchards in Queensland:
  - a) symptoms of *P. noxius* were first observed in avocado orchards in Queensland in 2001, causing progressive tree death in the Atherton Tablelands.
  - b) *P. noxius* was first positively identified as the causal agent of avocado tree death in Maleny, Queensland in 2002.
- (6) MPI had previously considered the risk of *P. noxius* in Wollemia pine in 2008, and completed a risk analysis of other hosts and distribution of *P. noxius* in 2010.
- (7) A summary of risk is provided in sections 19 32 of this RMP. Whole plants (including rooted cuttings) are considered to present a risk of entry of *P. noxius* and are the subject of risk management measures proposed by this RMP.
- (8) MPI have been working with importers of host plants of *P. noxius* since 2010 to prohibit the entry of whole plants grown in soil.

## **Commodity Description**

- (9) IHS 155.02.06: *Importation of Nursery Stock* specifies the import requirements for the following commodity sub-classes: whole plants, cuttings, dormant bulbs, plants invitro/tissue culture and pollen for breeding purposes.
  - a) the IHS defines whole plants as a nursery stock commodity sub-class for rooted cuttings and whole plants.

## **Trade**

- (10) The New Zealand horticultural industry continues to grow and total horticultural exports are now close to \$4 billion (Fresh Facts, 2014). New Zealand's most valuable horticulture export continues to be wine returning \$1.3 billion.
- (11) Avocado exports have increased in value to \$93 million per year (Fresh Facts 2014).

## **Current Requirements**

(12) *P. noxius* is not specifically managed in IHS 155.02.06: *Importation of Nursery Stock*, and is not currently listed as a quarantine pest.

- (13) Under the current IHS 155.02.06: *Importation of Nursery Stock* a number of 'basic' conditions must be met for all types of nursery stock imported into New Zealand, including whole plants and rooted cuttings.
- (14) The 'basic' conditions in section 2 of the IHS applying to whole plants are:
  - Section 2.2.1.4 (Cleanliness): Only inert/synthetic material may be used for protection, packaging and shipping material of the nursery stock, and action will be taken for consignments which are contaminated with soil;
  - b) Section 2.2.1.5 (Phytosanitary Certificate): Prior to issuing the phytosanitary certificate, the exporting National Plant Protection Organisation must inspect the consignment to certify that it is free from visually detectable regulated pests (this includes symptoms of infection);
  - c) Section 2.2.1.6 (Pesticide treatments for whole plants and cuttings): Whole plants and rooted cuttings must either be grown in soil-free media or the soil must be removed and the roots dipped in a pesticide prior to export. This requirement manages the risk of insects and nematodes;
  - d) Section 2.2.1.13 (Post Entry Quarantine): All whole plants must be imported into a post entry quarantine (PEQ) facility for a period of active growth. Symptomatic plant material must be tested to ensure it is free from regulated organisms before it can be given biosecurity clearance to enter New Zealand.

## **Source Information**

- (15) The following information was used in the development of the RMP to identify the appropriate measures to manage *P. noxius* on imported nursery stock.
  - a) Wollemia nobilis (Wollemi pine) Nursery Stock from Australia (MPI) Risk Analysis (March 2008): http://mpi.govt.nz/document-vault/2890
  - b) MAF Biosecurity New Zealand: *Phellinus noxius* pest risk analysis, 21 June 2011 (available on request).

## International Setting

- (16) Where possible, phytosanitary measures are aligned with international standards, guidelines, and recommendations as per New Zealand's obligations under Article 3.1 of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), WTO 1995 and Section 23(4) (c) of the Biosecurity Act 1993.
- (17) The SPS Agreement states that phytosanitary measures must not discriminate unfairly between countries or between imported or domestically produced goods, and where there is a choice of phytosanitary measures to reduce risk to an acceptable level, WTO members must select the least trade restrictive measure.

## **Objective**

(18) MPI's objective is to ensure the biosecurity risk posed by *P. noxius* on imported nursery stock is managed appropriately and is consistent with New Zealand's domestic legislation and international obligations.

## Summary of Risk

## A. Likelihood of entry

- (19) The likelihood of *P. noxius* entering New Zealand on cuttings and budwood of host species is considered to be negligible because there is no evidence that it is present in leaves, stems or branches of plants.
- (20) The likelihood of *P. noxius* entering into New Zealand from rooted plants (whole plants) is also considered to be low, however the current requirements for whole plants do not fully manage the risk of entry.

## B. Likelihood of exposure

(21) The likelihood of exposure is considered to be moderate in areas such as the far northern region of New Zealand where imported nursery stock could be planted in the environment. Physical contact of infected roots with healthy roots generally transfers *P. noxius* to roots of healthy plants (Brooks, 2002).

## C. Likelihood of establishment

- (22) The likelihood of establishment in New Zealand is considered to be moderate as *P. noxius* is a high temperature organism associated with tropical and subtropical areas (Ann et al. 2002). *P. noxius* may therefore be able to establish in the far north areas of New Zealand.
- (23) *P. noxious* could be spread by people transplanting infected plants in an uninfected area as movement of soil and plant material is not controlled within New Zealand.

## D. Potential Impacts

- (24) *P. noxius* spreads from tree to tree mainly by root-to-root contact and can exist on decaying roots in the soil for more than 10 years, causing major losses in timber and hardwood plantations, fruit orchards, and landscapes.
- (25) Plantations and orchards cannot be replanted for many years due to the longevity of *P. noxius* in the soil and its broad host range (Brooks, 2002).
- (26) There are no known treatments or cures for *P. noxius*, so if it established in an orchard or plantation, the only management option is to remove infected trees and as much of the root system as possible.
- (27) Ornamental plants are important components of domestic, leisure and working environments. *P. noxius* affects ornamental and amenity trees such as windbreak trees, parks, roadsides and around residences or other places associated with human activities (Anne et al. 1999).
- (28) Hosts are mostly tropical tree species and include cacao, coffee, tea, timber trees (Hodges and Tenorio 1984). It is more common on hardwood species, but also known on conifers (e.g. hoop pine Araucaria cunninghamii) (I. Hood pers. comm. 2011).
- (29) P. noxius has been found in native rain forests in American Samoa (Brooks 2002).

## Risk Management

- (30) Basic conditions in section 2 of the IHS applying to whole plants do not manage the risk of entry of *P. noxius* into New Zealand. The root rot can be transmitted through infected soil and lead to root infection of whole plants and rooted cuttings. Basic conditions allow for whole plants to be grown in soil and have the soil washed off prior to export, which doesn't manage the risk of *P. noxius*.
- (31) Imported nursery stock is grown in PEQ facility for a minimum of three months. It is not known whether this is long enough or if this would be suitable for symptoms of infection to be observed through wilting of the leaves, or mycelia to become evident on the roots or stem of plants.

- (32) Additional measures are proposed to manage the risk of *P. noxius* in imported nursery stock, these are:
  - a) a new section "*Measures for P. noxius*" is incorporated within the basic conditions (section 2.2.1.13);
  - b) requirements of section 2.2.1.13 apply only to whole plants (including rooted cuttings) which are hosts of *P. noxius*;
  - c) the plants are accompanied by a phytosanitary certificate, issued by the exporting NPPO that certifies that the risk has been managed by one of the following declarations:
  - (i) "The plants were raised from seed/cuttings in soil-less rooting media in containers maintained out of contact with the soil"

#### OR

(ii) "The plants have been sourced from a "Pest free area" free from Phellinus noxius".

## **Regulation at Genus Level**

- (33) Under the SPS Agreement, MPI regulates natural hosts of plant diseases based on scientific evidence. Where there is scientific uncertainty, MPI may apply a precautionary approach to manage the risk. MPI manages *P. noxius* at genus level when three or more species of a genus are found to be natural hosts. The susceptibility of multiple species in a genus suggests high susceptibility, and more species are likely to be hosts for the pathogen. Regulation at genus level therefore reduces the risk of import of *P. noxius*.
  - a) It is proposed that the following genera are regulated as genus level:
    - (i) Araucaria spp.; 3 species listed in Appendix 1
    - (ii) Bauhinia spp.: 4 species listed in Appendix 1
    - (iii) Eucalyptus spp.: 4 species listed in Appendix 1
    - (iv) Ficus spp.: 5 host species listed in Appendix 1
- (34) MPI proposes to regulate the following genera as the Risk Assessment does not identify the host to species level (unnamed species):
  - (i) Albizia spp.: Albizia spp. including A. lebbek listed in Appendix 1
  - (ii) Bougainvillea spp.: Bougainvillea spp. listed in Appendix 1
  - (iii) Cassia spp.: Cassia spp. listed in Appendix 1
  - (iv) Casuarina spp.: Casuarina spp. listed in Appendix 1
  - (v) Cinnamomum spp.: Cinnamomum spp. listed in Appendix 1
  - (vi) Crataegus spp.: Crataegus spp. listed in Appendix 1
  - (vii) Diospyros spp.: Diospyros spp. including D. kaki listed in Appendix 1
  - (viii) Populus spp.: Populus spp. listed in Appendix 1
  - (ix) Rosa spp.: Rosa spp. listed in Appendix 1
- (35) MPI regulates *P. noxius* at the species level when one or two species of a plant genus is found to be natural host.

#### **Additional Declarations**

#### A. Contact with soil

(36) The risk of *P. noxius* can be managed by ensuring that whole plants and rooted cuttings have been kept out of contact with infected soil. Plants raised from seeds/ cuttings in soil-less rooting media and grown in containers maintained out of contact with the soil are considered free from *P. noxius*.

(37) The exporting National Plant Protection Organisation (NPPO) would endorse this additional declaration on the phytosanitary certificate.

Note: This is an existing declaration in section 2.2.1.6 (part A) of the IHS 155.02.06: *Importation of Nursery Stock*, to manage the risk of insects on the roots of whole plants.

Note: The second option in 2.2.1.6 (part A) whole plants grown in soil, with the soil washed and the roots dipped in Fenamiphos prior to export, is not permitted for hosts of *P. noxius*.

#### B. Pest Free Area (PFA)

- (38) International Standards for Phytosanitary Measures (ISPM) 4: Requirements for the establishment of pest free areas describe the requirements for the establishment and use of PFA as a risk management option for meeting phytosanitary requirements for the import of plants.
- (39) Exporting country NPPO's from countries where *P. noxius* is not known to occur may endorse a Pest free area additional declaration on the phytosanitary certificate.
- (40) Normally PFA status is based on specific surveying for a quarantine pest or disease, such as an official delimiting or detection survey. It is accepted internationally that pests or diseases that have never been detected in, or that have been detected and eradicated from, an area should not be considered present in an area.
- (41) When sufficient information is available to support a PFA declaration, this phytosanitary measure is usually considered to provide a very high level of protection.

## Feasibility & Practicality of Measures

- (42) PFA declarations can only be supplied by exporting countries where *P. noxius* is absent. However, some countries (such as Australia) may be able to provide a PFA declaration for a restricted region / state or geographic area. MPI will discuss the implementation of PFA during consultation.
- (43) A proposed measure for plants to be raised from seeds/ cuttings in soil-less rooting media in containers maintained out of contact with the soil, is considered achievable by all trading partners.
- (44) Additional financial expenditure and additional time resource are not expected to be prohibitive for trading partners to achieve the proposed measures.

## **Proposed IHS Requirements**

- (45) This RMP proposes that *P. noxius* is a regulated quarantine pest, to be managed on imported nursery stock under the IHS 155.02.06: Importation of Nursery Stock.
- (46) P. noxius will be listed as a quarantine pest in the schedules of the IHS applying to host species. Where the schedule includes other species that are not hosts of *P. noxius*, each species to which the measures for *P. noxius* apply will be stated.
- (47) The requirements apply to all countries.
- (48) The requirements for *P. noxius* do not apply to host species which can only be imported as cuttings and tissue cultures.
  - a) While no specific additional declarations or testing will be required, *P. noxius* will be included in the list of quarantine pests for the applicable schedule.

## Appendix 1: Known Host Species and Distribution

This Appendix includes the following information relevant to the regulation of *P. noxius* on imported nursery stock, as identified in the Risk Analysis (MAF Biosecurity 2011):

- Table 1: Species which can be imported as whole plants to be regulated for *P. noxius*
- Table 2: Host species which can be imported as nursery stock, not including whole plants
- Table 3: Host species which cannot currently be imported into New Zealand
- Table 4: Countries where *P. noxius* is recorded as present

#### Table 1: Species which can be imported as whole plants to be regulated for P. noxius

At a minimum, *ALL* imported nursery stock must meet the Entry Conditions specified in Section 2.2 of the IHS. The table below identifies where additional entry requirements must be met for each species as identified in Section 3 'Schedule of Special Entry Conditions'.

**Note:** As identified in the <u>Risk Management</u> section, MPI are proposing to regulate at the genus level where:

- more than three species are identified as a host
- the host is identified to the genus level only in scientific literature(i.e. is an unnamed species)

Schedule of special entry	Host species	
conditions	Tiost species	
Conditions		
Basic Entry Conditions	Adenanthera pavonina	Delonix regia
PBI Specification:	Agathis robusta (syn. A. palmerstonii)	<ul> <li>Elaeocarpus grandis (syn. E.</li> </ul>
L2 (Basic)	Albizia spp. (including A. lebbek)	serratus)
	Aleurites fordii	<ul> <li>Elaeocarpus sylvestris (syn. E.</li> </ul>
	Aleurites moluccana	sylvestris var. ellipticus)
MPI propose a new schedule to	Anacardium occidentale	<ul> <li>Gardenia augusta (syn. G.</li> </ul>
manage <i>P. noxius</i> on these	Annona cherimola	jasminoides)
hosts:	Annona squamosa	Grevillea robusta
Araucaria PBI Specification:	Aralia elata	<ul> <li>Hibiscus rosa-sinensis</li> </ul>
L2 see 155.02.06 under	Araucaria spp. (including A.	<ul> <li>Hibiscus tiliaceus</li> </ul>
Araucaria	bidwillii, A. cunninghamii, A.	Ilex rotunda
Aradearia	heterophylla)	<ul> <li>Lagerstroemia speciosa</li> </ul>
	Averrhoa carambola	<ul> <li>Lagerstroemia subcostata</li> </ul>
	Azadirachta indica	<ul> <li>Leucaena leucocephala</li> </ul>
	Bauhinia spp. (including B.	<ul> <li>Ligustrum japonicum</li> </ul>
	acuminata, B. purpurea, B.	<ul> <li>Liquidambar formosana</li> </ul>
	racemosa, B. variegata)	<ul> <li>Melia azedarach</li> </ul>
	Boehmeria nivea	Morinda citrifolia
	Bombax ceiba	<ul> <li>Nephelium lappaceum</li> </ul>
	Bougainvillea spp.	<ul> <li>Pachira aquatica (syn. P.</li> </ul>
	Breynia nivosa	macrocarpa)
	Broussonetia papyrifera	Piper nigrum
	Calophyllum inophyllum	Pistacia chinensis
	Cananga odorata	<ul> <li>Podocarpus macrophyllus</li> </ul>
	Cassia fistula	Podocarpus macrophyllus
	Cassia grandis	<ul> <li>Rhaphiolepis umbellata</li> </ul>
	Cassia spp.	Samanea saman
	Casuarina equisetifolia	Schefflera actinophylla
	Casuarina spp.	Schefflera octophylla
	Celtis sinensis	Stenocarpus sinuatus
	Codiaeum variegatum	Tabebuia chrysantha
		Terminalia catappa
		Thevetia peruviana
	Note: requirements will apply to all specie	es imported under this schedule
Acacia	Artemisia capillaris	Duranta repens
PBI Specification:	Artemisia capillaris     Artemisia princeps	Nerium oleander
<u>L2 see 155.02.06 under</u>	- 7 il torridia printopo	- Honam Gloundon
Acacia		

Schedule of special entry	Host species
conditions	
Acrocomia PBI Specification: L2 see 155.02.06 under Acrocomia	<ul> <li>Areca catechu</li> <li>Areca triandra</li> <li>Chrysalidocarpus lutescens</li> <li>Cocos nucifera</li> <li>Elaeis guineensis</li> <li>Roystonea regia</li> </ul>
Aesculus PBI Specification: L2 see 155.02.06 under Aesculus	Fraxinus griffithii (syn. F. formosana)     Rhus succedanea
Arbutus PBI Specification: L2 see 155.02.06 under Arbutus	Cinnamomum spp. (including C. camphora, C. verum (syn. C. zeylanicum))      Michelia compressa      Michelia figo     Osmanthus fragrans
Camellia  PBI Specification: L2 see 155.02.06 under Camellia	Camellia japonica
Camellia sinensis  PBI Specification: L2 see 155.02.06 under Camellia sinensis	Camellia sinensis  Note: requirements will apply to all species imported under this schedule
Cedrus PBI Specification: L3 see 155.02.06 under Cedrus	Chamaecyparis formosensis     Cupressus lusitanica
Crataegus PBI Specification: L2 see 155.02.06 under Crataegus	Crataegus spp.
PBI Specification:  L2 see 155.02.06 under  Delphinium	Barleria cristata     Erythrina spp. (including Erythrina variegata (syn. E. variegata var. orientalis))
Diospyros  PBI Specification:  L3 see 155.02.06 under  Diospyros	Diospyros spp. (including D. kaki)  Note: requirements will apply to all species imported under this schedule
Eriobotrya  PBI Specification:  L2 see 155.02.06 under  Eriobotrya	Eriobotrya japonica
Eucalyptus PBI Specification: L2 see 155.02.06 under	Eucalyptus spp. (including E. camaldulensis, E. citriodora, E. grandis, E. tessellaris)
Eucalyptus	Note: requirements will apply to all species imported under this schedule
Eugenia PBI Specification: L2 and L3 see 155.02.06 under Eugenia	Syzygium samarangense
Ficus PBI Specification: L2 see 155.02.06 Ficus	Ficus spp. (including F. elastica, F. pumila (syn. F. hanceana), F. microcarpa, F.obliqua, F. religiosa)
H.I.	Note: requirements will apply to all species imported under this schedule
Hebe PBI Specification: L2 see 155.02.06 under Hebe	Albizia julibrissin     Hibiscus schizopetalus

Schedule of special entry	Host species		
conditions			
Hydrangea PBI Specification: L2 see 155.02.06 under Hydrangea	Hydrangea chinensis     Morus alba (syn. M. australis)		
Litchi  PBI Specification: L2 see 155.02.06 under Litchi	Litchi chinensis  Note: requirements will apply to all species imported under this schedule		
Mangifera PBI Specification: L2 see 155.02.06 under Mangifera	Mangifera indica		
Metrosideros PBI Specification: L2 see 155.02.06 under Metrosideros	Melaleuca leucadendra		
Nandina PBI Specification: L2 see 155.02.06 under Nandina	Nandina domestica  Note: requirements will apply to all species imported under this schedule		
Planera PBI Specification: L2 see 155.02.06 under Planera	Zelkova serrata		
Populus PBI Specification: L2 see 155.02.06 under Populus	Populus spp.  Note: requirements will apply to all species imported under this schedule		
Rhododendron  PBI Specification:  L2 see 155.02.06 under  Rhododendron	Rhododendron x obtusum (syn.     Rhododendron obtusum)		
Rosa  PBI Specification: L2 see 155.02.06 under Rosa	Rosa spp.  Note: requirements will apply to all species imported under this schedule		
Salix  PBI Specification: L2 see 155.02.06 under Salix	Salix babylonica		
Ulmus PBI Specification: L3 see 155.02.06 under Ulmus	Ulmus parvifolia		

## Table 2: Host species which can be imported as nursery stock, not including whole plants

At a minimum, *ALL* imported nursery stock must meet the Entry Conditions specified in Section 2.2 of the IHS. The table below identifies where additional entry requirements must be met for each species as identified in Section 3 'Schedule of Special Entry Conditions'.

Schedule of special entry conditions	Host species	Approved commodity types	Proposed change to schedule
Artocarpus see 155.02.06 under Artocarpus	Artocarpus altilis     Artocarpus heterophyllus	Plants in-vitro only	No specific measures will be required, as only tissue culture can be imported under this schedule.
<u>Citrus</u> (Fortunella and Poncirus) <u>L2,L3 see 155.02.06 under</u> <u>Citrus</u>	Citrus spp. (including C. aurantiifolia, C. reticulata)	Cuttings (dormant only); Plants in-vitro	Phellinus noxius is added to the pest list for Citrus.  No specific measures will be required, as only cuttings and tissue culture can be imported under this schedule.
Cycas L2 see 155.02.06 under Cycas	Cycas taiwaniana	Cuttings (dormant, including offsets); Plants in-vitro	No specific measures will be required, as only cuttings and tissue culture can be imported under this schedule.
Persea L3 see 155.02.06 under Persea	<ul> <li>Machilus thunbergii</li> <li>Persea americana (syn P. gratissima)</li> </ul>	Cuttings (dormant only); Plants in-vitro	Phellinus noxius is added to the Pest List for Persea. No specific measures will be required, as only cuttings and tissue culture can be imported under this schedule.
Prunus L2,L3 see 155.02.06 under Prunus	<ul><li>Prunus campanulata</li><li>Prunus mume</li><li>Prunus persica</li></ul>	Cuttings;Plants invitro	Phellinus noxius is added to the Pest List for Prunus. No specific measures will be required, as only cuttings and tissue culture can be imported under this schedule.
L2,L3 see 155.02.06 under Vitis	Vitis vinifera	Cuttings;Plants invitro	Phellinus noxius is added to the pest list for Vitis.  No specific measures will be required, as only cuttings and tissue culture can be imported under this schedule.

#### Table 3: Host species which cannot currently be imported into New Zealand as nursery stock

The species listed in this table are known hosts of *P. noxius*; however, they cannot currently be imported into New Zealand as nursery stock.

#### **Host species Entry Prohibited** • Euonymus japonicas Lantana camara Cannot be imported into New Zealand as nursery stock: Nursery Stock import specification on PBI 'Require assessment' Alstonia scholaris Ipomoea pes-caprae Bischofia javanica Khava nvasica Cajanus cajan Kigelia pinnata Calocedrus formosana Manihot esculenta (syn. M. utilissima) Castanospermum australe Murraya paniculata Casuarina torulosa • Pinus spp.; Pinus elliottii; Pinus thunbergii Cedrela odorata (syn. C. mexicana) Pongamia pinnata Ceiba pentandra Pterocarpus indicus Chorisia speciosa Pyrus pyrifolia Coffea sp.; Coffea arabica; Coffea canephora Sterculia foetida Dalbergia sissoo · Swietenia spp.; Swietenia mahagonia Dimocarpus longan Taiwania cryptomerioides Firmiana simplex Tectona grandis Flindersia brayleyana • Tephrosia sp.; Tephrosia vogelii Hevea sp.; Hevea brasiliensis • Theobroma cacao Cannot be imported into New Zealand: Species not listed on PBI Acacia aulacocarpa; Acacia confusa; Acacia mangium Jatropha integerrima

Actinodaphne pedicellata

Annona montana

Ardisia quinquegona; Ardisia sieboldii Barringtonia asiatica; Barringtonia samoensis

Blepharocarya involucrigera Broussonetia kazinoki Calophyllum neoebudicum Canarium harveyi

Castanospora alphandii Cerbera manghas Chlorophora excelsa

Cinnamomum japonicum; Cinnamomum kanehirai

Clutia sp. Cola nitida

Cordia aspera; Cordia dichotoma

Crescentia cujete Crossostylis biflora

Crotalaria micans (syn. C. anagyroides)

Cryptocarya concinna; Cryptocarya mackinnoniana Diospyros oldhamii; Diospyros samoensis; Diospyros

vera (syn. D. ferrea var. buxifolia)

Dysoxylum samoense Elattostachys falcata Eucalyptus drepanophylla

Ficus copiosa; Ficus pumila var. awkeotsang; Ficus

septica; Ficus tinctoria; Ficus virgata

Flemingia macrophylla

Flindersia pimenteliana; Flindersia schottiana

Flueggea flexuosa Garcinia subelliptica

Glochidion obovatum; Glochidion ramiflorum

Hedera australiana Heritiera spp. Hernandia nymphaefolia

Inocarpus fagifer Intsia bijuga

Keteleeria davidiana var. formosana

Kissodendron australianum Koelreuteria henryi

Lactuca indica

Lagerstroemia turbinata Lannea coromandelica

Litsea glutinosa; Litsea hypophaea; Litsea japonica

Macaranga harveyana; Macaranga stipulosa; Macaranga tanarius

Machilus zuihoensis Maesa tenera Malaisia scandens Mallotus paniculatus Melicope merrilli Melodinus angustifolius Mitrephora froggattii Muntingia calabura Myristica fatua Neolitsea parvigemma Neonauclea forsteri Ochroma lagopus Palaquium formosanum

Pinus caribaea var. hondurensis; Pinus merkusii

Pipturus argenteus

Planchonella grayana; Planchonella samoensis

Pometia pinnata Pygeum turneranum Rhus taitensis Saurauia oldhamii Spondias dulcis Sterculia nobilis Swietenia macrophylla Syzygium inophylloides

Terminalia boivinii; Terminalia richii

Thespesia populnea Trema orientalis Urena lobata

Table 4: Countries where *Phellinus noxius* is recorded as present

Region	Country	
Africa	Angola (CPC 2007) Benin (CPC 2007) Burkina (CPC 2007) Cameroon (CPC 2007) Central African Republic (CPC 2007) Cote d'Ivoire (Farr and Rossman 2010) Democratic Republic of Congo (CPC 2007) Faso (CPC 2007) Gabon (CPC 2007)	Ghana (Farr and Rossman 2010) Kenya (CPC 2007) Liberia (Nandris et al. 1987) Nigeria (Farr and Rossman 2010) Sierra Leone (Farr and Rossman 2010) Tanzania (Farr and Rossman 2010) Togo (CPC 2007) Uganda (CPC 2007)
Asia	Andaman Islands (Farr and Rossman 2010) China (Kai-Ming and Chee 1989) Islands of China (Ann et al. 2002) East Indies (Farr and Rossman 2010) India (Farr and Rossman 2010) Indonesia (Farr and Rossman 2010) Islands of Japan (Ann et al. 2002) Malay Peninsula (Farr and Rossman 2010)	Malaysia (Farr and Rossman 2010) Myanmar (Farr and Rossman 2010) Nicobar Islands (Farr and Rossman 2010) Pakistan (CPC 2007) Philippines (CPC 2007) Singapore (CPC 2007) Sri Lanka (CPC 2007) Taiwan (Ann et al. 2002) Vietnam (CPC 2007)
Central America & Caribbean	Brazil (Farr and Rossman 2010) Costa Rica (CPC 2007)) Cuba (Farr and Rossman 2010)	MPI does not accept the record of presence in Puerto Rico. A review of the fungal databases on that island did not contain any records of <i>P. noxius</i> (Ridley 2001).
Oceania	American Samoa (Brooks 2002) Australia (NSW, Queensland) (CPC 2007) Fiji (Farr and Rossman 2010) Mariana Islands (Hodges and Tenorio 1984)	New Guinea (Farr and Rossman 2010) Papua New Guinea (Farr and Rossman 2010) Samoa (Farr and Rossman 2010; Gibson 1979) Vanuatu (Gibson 1979)

## Appendix 2: Proposed Measures in IHS 155.02.06

A new section is proposed to be in incorporated within Section 2.2.1 Basic Conditions: 2.2.1.13 *Measures for Phellinus noxius*.

The measures in this section apply only to known host plants which can be imported as whole plants and rooted cuttings (as identified in Appendix 1, Table 1).

#### 2.2.1.13 Measures for *Phellinus noxius*

All whole plants from all countries (not cuttings, dormant bulbs or tissue culture) from species which are listed as hosts of P. noxius in the following schedules must meet the requirements of this section:

- Acacia
- Acrocomia
- Aesculus
- Araucaria
- Arbutus
- Camellia
- Camellia sinensis
- Cedrus
- Crataegus

- Delphinium
- Diospyros
- Eriobotrya
- Eucalyptus
- Eugenia
- Ficus
- Hebe
- Hydrangea
- Litchi

- Mangifera
- Metrosideros
- Nandina
- Planera
- Populus
- Rhododendron
- Rosa
- Salix
- Ulmus

The phytosanitary certificate must endorse one of the following additional declarations:

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

#### OR

b) "The plants have been sourced from a "Pest free area" free from *Phellinus noxius*".

#### **Guidance:**

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

- Africa: 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
- Asia: 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
- Oceania: American Samoa, Australia (NSW, Queensland), Fiji, Mariana Islands, New Guinea, Papua New Guinea, Samoa, Vanuatu

MPI does not accept the record of presence in Puerto Rico. A review of the fungal databases on that island did not contain any records of *P. noxius* (Ridley 2001).

**Note:** The entry conditions in 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*
- c. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
- 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

**Note**: Applies to all members of the *Acacia* genus.

## B. For Cuttings

**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*
- c. Conditions for *Xylella fastidiosa* (section 2.2.1.12)

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

#### Acrocomia

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

## **GENERAL CONDITIONS:**

Approved Countries: Australia, Hawaii, mainland USA

Quarantine Pests: 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 2.2.1.13) **Note:** Only applies to the following species: *Phoenix roebelenii*
- 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 *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)
- 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. For Plants in Tissue Culture from All Countries:

#### Araucaria

**Note:** The entry conditions in 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 *Phellinus 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 following species: *Magnolia grandiflora*
- c. Conditions for *Phellinus noxius* (section 2.2.1.13)
   Note: Applies to all members of the *Cinnamomum* genus; and
   Note: Applies to the following species: *Michelia compressa*; *Michelia figo*; *Osmanthus fragans*.

# **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) **Note:** Only applies to the following species: *Magnolia grandiflora*

#### 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 *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
Countries:	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
	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:

## **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)

#### **For Tissue Culture:**

PEQ:Level 3

**Minimum Period**: 3 months

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

**Note:** The entry conditions in 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 *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**

PEO: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.

## Delphinium

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

#### **GENERAL CONDITIONS:**

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

**Quarantine Pests**: Ceratocystis fimbriata; Phellinus noxius; Xylella fastidiosa; Uredinales

## **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 *Erythrina* genus
- b. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
   Note: Only applies to the following species: *Convolvulus arvensis*; *Crepis capillaris*, *Geranium dissectum*, *Myrica cerifera*, *Salvia mellifera*, *Senecio vulgaris*
- c. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note**: Applies to all members of the *Erythrina* genus; **and Note**: Applies to the following species: *Barleria cristata*.
- 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:**

## **Diospyros**

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

## **GENERAL CONDITIONS:**

**Approved Countries**: All

Quarantine Pests: Cephalosporium diospyri; 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)

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

#### **B.** For 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 *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) **Note**: Only applies to the following species: *Eucalyptus globulus*
- 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:** *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:**

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:**

PEQ: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 *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) **Note:** Only applies to the following species: *Ficus carica*
- 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:**

PEO: Level 2

**Minimum Period**: 3 months

- 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) **Note:** Only applies to the following species: *Ficus carica*
- c. 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 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)

b. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note:** Only applies to the following species: *Albizia julibrissin, Hibiscus schizopetalus* 

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

Minimum Period: 3 months

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

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

## Hydrangea

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

## **GENERAL CONDITIONS:**

**Approved Countries**: All

Quarantine Pests: Tetranychus kanzawai; 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)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note**: Only applies to the following species: *Hydrangea chinensis, 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

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

## Mangifera

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

#### **GENERAL CONDITIONS:**

Approved Countries: Australia, India, Pakistan, Mexico, Philippines

**Quarantine Pests**: 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 \_\_\_\_\_ (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:**

PEO: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 the following species: *Metrosideros excelsea, Metrosideros kermadecensis, Myrtus communis*
- 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 the following species: *Metrosideros excelsea, Metrosideros kermadecensis, Myrtus communis*
- c. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note:** Only applies to the following species: *Melaleuca leucadendra*

#### **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.

### Nandina

**Note:** The entry conditions in 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)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13)
- c. Additional declaration:

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

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

**PEQ:** Level 2

**Minimum Period:** 3 months

a. Additional declaration:

"The cultures have been derived from parent stock tested and found free of *Alternanthera mosaic virus* and *Plantago asiatica mosaic virus* ".

#### Planera

**Note:** The entry conditions in 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:

**For Whole Plants:** 

PEQ: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* 

**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 *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:

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)
- 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 *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*; *Phytophthora ramorum*; Uredinales

#### **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 *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:

**Note:** The entry conditions in this schedule only apply to species in the Plants Biosecurity Index listed under Import Specifications for Nursery Stock as "see 155.02.06 under *Rosa*", and are additional to those specified in sections 1, 2 and 3 of the import health standard. These conditions do not apply to *Rosa gymnocarpa*, for which there is currently no import health standard.

#### **GENERAL CONDITIONS:**

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

Quarantine Pests: Phellinus noxius; Uredinales; Xylella fastidiosa

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

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

PEQ: Level 2

**Minimum Period**: 6 months

- a. Conditions for *Xylella fastidiosa* (section 2.2.1.12)
- b. Conditions for *Phellinus noxius* (section 2.2.1.13)
- c. Additional declaration:

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

## **B.** For Cuttings (dormant):

**PEQ**: Level 1

**Minimum Period**: 6 months

a. Additional declaration:

"The plants have been sourced from a "Pest free area", 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 *Salix*", and are additional to those specified in sections 1, 2 and 3 of the import health standard.

## **GENERAL CONDITIONS:**

**Approved Countries**: All

 $\textbf{Quarantine Pests}: \ \textit{Erwinia salicis, Melampsora spp., Phellinus noxius; Phytophthora}$ 

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 *Phytophthora ramorum* (section 2.2.1.11)

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

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 *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. 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)
- d. Conditions for *Phellinus noxius* (section 2.2.1.13) **Note**: Only applies to the following species: *Ulmus parvifolia*

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

PEO:Level 3

**Minimum Period**: 3 months

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