Ministry for Primary Industries
Manatū Ahu Matua

Risk Management Proposal:

Revision of the Facility Standard: Post Entry Quarantine For Plants

FOR PUBLIC CONSULTATION

27 October 2015

New Zealand Government

Growing and Protecting New Zealand

Plant Imports

Plants, Food & Environment

Ministry for Primary Industries

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Part 1: Submissions

1) The Ministry for Primary Industries (MPI) invites comment from interested parties on the proposed revised Transitional Facility Standard: Post Entry Quarantine for Plants, which is supported by this document.

2) A transitional facility standard sets out the requirements in relation to building, maintaining and operating a transitional facility, and describes how a place becomes approved to this kind of facility. This standard is intended to replace the previous MAF Biosecurity Authority Standard PBC-New Zealand-TRA-PQCON: Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator (http://www.biosecurity.govt.nz/files/regs/stds/pbc-nz-tra-pqcon.pdf).

3) The New Zealand Ministry for Primary Industries (MPI) must consult with interested parties in accordance with section 39(1A) of the Biosecurity Act 1993 (the Act) and MPI's consultation policy before issuing or amending facility standards under section 39 of the Act.

4) MPI seeks formal comment on all aspects of the revised standard, and also request feedback on the Guidance Document: Post Entry Quarantine for Plants and the example operating manual that has been prepared to show how MPI anticipate the requirements of the standard could be met. MPI has developed this proposal based on the best available technical evidence and assessment of this evidence. If you disagree with the measures proposed to manage the risks, please provide either data or published references to support your comments. Similarly, if you support the proposed measures, or consider that additional measures are required to manage the risks, please provide appropriate evidence to support your comments. This will enable MPI to consider additional evidence which may change how risks are proposed to be managed.

5) The following points may be of assistance in preparing comments:

- Wherever possible, comments should be specific to a particular section/requirement of the standard;
- Where possible, reasons, data and supporting published references to support comments are requested;
- The use of examples to illustrate particular points is encouraged.

6) 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.

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

8) Should you wish to forward submissions in writing, please send them to the following address.

Plant Imports
Plants, Food & Environment
Ministry for Primary Industries

PO Box 2526
Wellington 6140
New Zealand

9) All submissions are required to arrive by close of business on Friday 27th November 2015; submissions received by the closure date will be considered during the development of the final standard. Submissions received after the closure date may be held on file for consideration when the issued standard is next revised/reviewed.

Official Information Act 1982

10) 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.

Part 2: Introduction

2.1 Background

11) MPI have undertaken a review of the standard for Post Entry Quarantine (PEQ) facilities for plants. This standard sets out the requirements that must be met when operating a PEQ facility to hold imported nursery stock or seed before it is given a biosecurity clearance.

12) The review has been supported by the Germplasm Advisory Committee[1] and guided by a project board made up of MPI, industry and Crown Research Institute representatives. The draft standard has been endorsed by the project board and is now available for public consultation.

13) The current PEQ standard (PBC-NZ-TRA-PQCON Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator) was issued in 1999. This standard is out of date and needs to be updated to ensure that plants in quarantine are managed in a manner that accurately reflects the risk associated with that material. The revised standard will achieve the purposes of the Biosecurity Act 1993, and will be aligned with other MPI standards and processes, and international guidelines (for example those given in the International Standard for Phytosanitary Measures [ISPM] 34, Design and operation of post-entry quarantine stations for plants).

14) Import requirements for plant material imported for propagation are specified in the relevant import health standard (IHS). All plant material imported for propagation must meet all requirements of either the IHS 155.02.06: Importation of Nursery Stock or 155.02.05: Importation of Seed for Sowing before it is cleared for entry into New Zealand; any imported plant material that does not meet the requirements of one of these IHS's should not be propagated. In some cases an IHS will specify that plants must be held in PEQ before they are given a biosecurity clearance. The purpose of this is to prevent any regulated pests or diseases (hereafter referred to as 'quarantine pests') that are present in imported plant material from being transferred to the wider environment. Actively growing plants in PEQ are inspected and/or tested to verify freedom from quarantine pests.

15) Plant material imported for propagation is one of the most high risk pathways for the inadvertent introduction of pests and diseases to new areas. Part of the reason for this is because plant pests can survive in living plant material that does not show any signs of infection. In addition, because plants imported for propagation may be further multiplied and/or widely distributed throughout the country, the likelihood of pests surviving and being transferred to suitable hosts in the wider environment is higher than for many other import pathways.

[1] GERMAC; the consultative forum between industry plant germplasm import groups and MPI

16) Regulated pests are frequently found in PEQ facilities as illustrated in the following table which shows interceptions recorded in MPI's interception database on plants in PEQ between January 2010 and April 2013:

Type of organism	Level of quarantine		
	Level 1	Level 2	Level 3
	Number of interceptions in PEQ		
Animals (e.g. insects, mites, nematodes etc.)	0	15	2
Bacteria	0	1	0
Fungi	0	31	4
Virus	2	3	0

17) New Zealand remains free from many pests and diseases that are present in other countries. However, the impacts of recent introductions such as Psa on kiwifruit and the tomato potato psyllid on potato and other crops highlight the ongoing need to prevent such organisms from entering and establishing in the country. As such, there is a heightened awareness of the need to prevent new pests and diseases from entering and establishing in New Zealand.

18) There is also an increased awareness that the presence of new quarantine pests may have market access implications when exporting goods to other countries, given that importing countries have also become more aware of the need to exclude pests and diseases.

19) Increased sensitivity of diagnostic techniques has led to a greater understanding of host ranges of quarantine pests, and an awareness that regulation may be necessary to prevent the entry and establishment of pests and diseases on previously unrecognised hosts. For example, *Potato spindle tuber viroid* is now managed on a range of ornamental hosts; even though the viroid does not cause serious disease on these hosts, it is actively managed to prevent its introduction and spread to crops such as potato, where it could have a major production and export implications.

20) Taken together, the above factors mean that the risk profile of many plant species has changed since the current standard was issued in 1999, and more stringent measures are considered necessary to strengthen New Zealand's biosecurity system and help prevent new pests and diseases from entering and establishing in New Zealand.

21) The revised standard is also intended to be more flexible and easier to understand.

2.2 Purpose

22) The purpose of this document is to provide technical justification for the proposed changes in the revised standard. This includes:

- Changes that have been made to the format of the standard as part of the MPI Requirements and Guidance Programme (RGP)[2];
- Changes that have been made to the requirements of the standard.

[2] More information about the Requirements and Guidance Programme can be found at http://www.biosecurity.govt.nz/files/regs/stds/sip-story.pdf.

2.3 Context

23) Where possible, phytosanitary import requirements are aligned with international standards, guidelines, and recommendations as per New Zealand's obligations under Article 3.1 of the World Trade Organisation (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement; WTO, 1995), and with the Biosecurity Act 1993.

International

24) The SPS Agreement sets in place rules that protect each country's sovereign right to take the measures necessary to protect the life or health of its people, animals, and plants while at the same time facilitating trade. It embodies and promotes the use of science-based risk assessments to manage the risks associated with the international movement of goods.

"The SPS Agreement will continue to guide how New Zealand sets standards and makes decisions related to biosecurity. In particular, it will be important to maintain the standards of transparency and scientific rigour required by the SPS Agreement, and to make decisions as quickly as possible. This will encourage other countries to comply with the rules of the SPS Agreement, and also demonstrate that New Zealand's strict controls are justified to countries that challenge them." (Balance in Trade, online reference ISBN 978-0-478-33881-2)

25) In keeping with New Zealand's obligations under the WTO SPS Agreement and the International Plant Protection Convention (IPPC), phytosanitary measures must:

- Be justified and can only be for regulated pests. The strength of any phytosanitary measure will depend on the assessment of risk, with an emphasis on the consequences of the pest establishing in New Zealand.
- Not discriminate unfairly between countries or between imported and domestically produced goods.
- Be based on international standards wherever possible, but WTO members can adopt a measure that is more stringent than an international standard, provided the measure is scientifically justified.

26) Note that international standards, guidelines or recommendations referred to in the WTO agreement are those of Codex, OIE (World Organisation for Animal Health) and the IPPC (including regional standards developed by Asia Pacific Plant Protection Commission).

Domestic

27) The New Zealand biosecurity system is regulated through the Biosecurity Act 1993. Section 22 of the Act describes an import health standard (IHS) and requires all risk goods (including plants and plant products) entering New Zealand to be covered by one. Section 39 of the Act describes approval and cancellation of approval of transitional and containment facilities. The Ministry for Primary Industries (MPI) is the government authority responsible for maintaining biosecurity standards for the effective management of risks associated with the importation of risk goods into New Zealand (Part 3, Biosecurity Act 1993).

28) MPI is committed to the principles of transparency and evidence-based technical justification for all phytosanitary measures, new and amended, imposed on importing pathways.

Part 3: Proposed amendments to requirements of the facility standard

3.1 Format changes

29) The revised standard has been prepared using standardised templates that have been developed as part of the MPI Requirements and Guidance Programme (RGP). These templates have been designed to ensure that MPI requirements and guidance are easy to find, easy to understand and developed in a clear and consistent way.

30) The revised standard has been prepared as two separate documents as follows:

(i) The *Facility Standard: Post Entry Quarantine for Plants*. This document sets out all legal requirements that must be met when operating a facility.

Note: The Introduction to the standard is intended to provide general information in regards to the standard and does not form part of the legal requirements of the standard. All legal requirements are set out in Parts 1 – 4 of the standard.

(ii) The *Guidance Document: Post Entry Quarantine for Plants*. This document does not form part of the legal requirements of the standard, but is intended to provide background information, identify processes that meet the required level of biosecurity practice, and to describe methods which can be used to meet the requirements of the standard.

31) The revised standard has been prepared as two documents to ensure that all legal requirements relating to building, maintaining and operating a PEQ facility are made as clear and concise as possible, and are not confused with standard operating procedures or other information. Any information which does not form part of the legal requirements (for example explanations of why certain procedures are required, or examples of how the requirements of the standard can be met) has been included in the guidance document.

32) Also included as part of the consultation is an example *Operating Manual* for a hypothetical Level 2 PEQ facility. As discussed below, a key requirement of the revised standard is that all facilities must produce an operating manual to show how the requirements of the standard will be met. MPI have prepared the example operating manual to help operators of PEQ facilities to understand how the requirements of the revised standard can be met and to illustrate MPI expectations in terms of how to comply with the standard.

33) MPI welcomes comments on the proposed **formats** of each of the above documents.

3.2 Changes to standard requirements

34) This part of the risk management proposal summarise changes that may have significant implications for operators of PEQ facilities (for example in terms of increased compliance costs, or major changes in the way in which a facility will be run).

35) The revised standard has undergone major review and revision relative to the 1999 standard. This is because several areas have been identified (both physical and operational) where MPI consider that more stringent requirements are needed to

effectively manage the risks associated with imported plant material. The changes also reflect a change in MPI expectations of how facilities should be run since the current standard was issued in 1999. Some revisions have also been made to make the standard more transparent and easier to understand, and to provide greater flexibility for operators of PEQ facilities.

36) To put the proposed changes into context, background information is first provided to describe risk factors that are taken into account when considering what level of quarantine is appropriate for different types of plant material. This is followed by a description of the main changes proposed in the revised standard.

Factors considered when establishing levels of quarantine

37) The physical design, safeguards and operating procedures for a PEQ facility are based on pest biology. However, when evaluating what level of quarantine is necessary for a particular plant, the following factors are also taken into account:

- likelihood of entry of a quarantine pest via an import pathway;
- likelihood of establishment of a quarantine pest via an import pathway;
- potential environmental and/or economic consequences of establishment;
- whether vectors are present (or likely to be present) in New Zealand;
- whether vectors are likely to be present in close proximity to the quarantine facility;
- whether the same (or related) species as the imported plants are likely to be present in close proximity to the quarantine facility
- whether a particular quarantine pest is likely to be associated with the plant parts being imported (e.g. seeds vs. tissue cultures vs. bulbs vs. whole plants);
- presence or absence of the quarantine pest in the country of origin;
- assurances provided by the exporting country in regards to freedom from quarantine pests;
- whether material is from an MPI-accredited offshore facility, and if so the history of the facility and what testing has been done;
- available treatment methods (e.g. fungicide or insecticide treatment before plants enter quarantine);
- available testing methods (e.g. growing season inspection, biological indexing, PCR).

38) Requirements of the current standard do not adequately reflect all of the above factors. This means that plant material is not necessarily being held in the most appropriate level of quarantine relative to the risk posed by the material.

39) Safeguards proposed within the revised standard are intended to reduce to an acceptable level the likelihood of quarantine pests being introduced into New Zealand on nursery stock or seed. Containment measures are strengthened by using independent safeguards that have different modes of action. This may include using a combination of physical and operational measures (as identified in Table 1). Generally, the more independent safeguards that are used, the lower the level of risk. For example, this is why as well as being constructed to prevent the escape of quarantine pests, depending on the level of facility, secondary containment measures are also required to reduce the likelihood of quarantine pests escaping from a facility in the event of a primary containment failure.

40) Employing multiple safeguards can reduce the level of risk sufficiently to allow material to be held in a lower level of facility than would otherwise be required. For example, although it is widely recognised that plants should not be quarantined in areas where

crops related to the imported species are being grown, a facility can be constructed in such an area if additional safeguards are included to manage the risk.

41) Based on the above, it is proposed that existing levels of quarantine (Levels 1, 2 and 3 in the current standard) are modified, and another level of quarantine facility is added to the revised standard. This will allow plants to be held in a level of quarantine that better reflects the level of risk and will provide more options for MPI when assessing quarantine requirements for different types of plant material.

42) The proposed levels of quarantine in the revised standard are shown in Table 1. The new level of quarantine (named Level 3A) has more stringent requirements than Level 2, but is not as restrictive as proposed Level 3B requirements. This has been called Level 3A quarantine because operational requirements align closely with those proposed for Level 3B facilities. This level is intended for holding material which cannot safely be held in Level 2 facilities, but for which the requirements of the highest level of quarantine (named Level 3B in the revised standard) are too stringent. More detail about the different levels of quarantine are provided later in this risk management proposal.

43) Table 1 also identifies the types of quarantine pest that may be associated with material imported into each level of quarantine and describes operational measures that can be used to reduce the likelihood of quarantine pests being present. Examples have been included to show how the same plant species can be held in different levels of quarantine depending on the type of plant material that will be imported and what operational measures have been applied. All examples are based on the current requirements of the relevant IHS apart from examples for Level 3A facilities. Examples for Level 3A facilities are hypothetical, and before any material could be directed to a Level 3A facility the relevant IHS would need to be updated and amended based on an assessment of the risk associated with a particular import pathway.

Table 1 Proposed levels of quarantine in the revised PEQ standard and examples of plant species and quarantine pests expected to be contained within each level.

Level of quarantine	**Types of quarantine pest potentially associated with the host plant**	**Operational measures that may apply**	**Examples of plant/pathogen combinations that may be associated with imported material**		
			Quarantine pest	**Plant species/type of material**	**Rationale**
No quarantine required.	Various, all biosecurity risk managed offshore.	Approved countries only. Offshore assurances (e.g. MPI accreditation, phytosanitary certification). Import permit. Inspection on arrival.	None.	*Solanum tuberosum* tissue cultures.	From an accredited offshore facility, all testing completed offshore, tissue cultures only.
			None.	*Acer* tissue cultures.	Tissue cultures only, quarantine pests of *Acer* not associated with plants in tissue culture.
			None.	*Tulipa* dormant bulbs.	Bulbs produced under an MPI approved propagation scheme in the Netherlands only. The phytosanitary certificate must verify that bulbs were sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated bacteria and viruses, and free from (or treated for) regulated nematodes and bacteria".
Level 1 (L1) open field	Graft transmitted organisms (viruses, viroids or diseases of unknown aetiology) with no other means of transmission. Some other organisms if risk can be managed by a combination of operational and/or physical measures.	Approved countries only. Offshore assurances (e.g. growing season inspection, freedom from regulated pests, phytosanitary certification). Import permit.	*Cymbidium ringspot virus.*	*Tulipa* dormant bulbs (Part 3.1 of the *Tulipa* schedule).	Bulbs can only be imported from approved countries. Import permit and phytosanitary certificate required. The phytosanitary certificate must verify that bulbs were sourced from a “Pest free area”, “Pest free place of production” or “Pest free production site”, free from regulated viruses". Note: Various other pests of *Tulipa* are also listed in the nursery stock IHS. Based on an assessment of the residual risk associated with these organisms, and given other operational measures

		Treatment (e.g. for insects, mites, nematodes or fungi). Inspections on arrival and in PEQ. Quarantine pest unlikely to be associated with the plant parts being imported. Testing for specified quarantine pests completed offshore and/or preliminary quarantine in New Zealand completed in a higher level of facility.			listed in the IHS, L1 PEQ is considered an adequate level of quarantine.
			Apple scar skin viroid.	*Malus* seed that has already undergone quarantine and some testing in a higher level of PEQ.	Import permit and phytosanitary certificate required. Malus seedlings must have initially been grown in a higher level of quarantine. PCR and herbaceous indexing for *Apple scar skin viroid* must be done before plants are transferred to the L1 facility. Note: Tests for other regulated organisms on *Malus* seed will either have been completed or partially completed before plants are transferred to the L1 facility.
			LN33 stem grooving.	*Vitis* cuttings or tissue cultures from a non-accredited facility with all other testing completed in L3 PEQ.	Import permit and phytosanitary certificate required. Testing completed for all other regulated pests and diseases as required in the nursery stock IHS. Material must have already been actively growing in PEQ for a minimum of 16 months, with growing season inspections completed in a L3 facility.
			Cronartium flaccidum (Scots pine blister rust).	*Paeonia* (tree species) whole plants.	Material can only be imported from approved countries. Import permit and phytosanitary certificate required, with an additional declaration to verify that *C. flaccidum* is not known to occur in the country of origin. Pre-export fungicide treatment required. Isolation distance of 400m required from *Pinus* spp. (isolation from *Pinus* needed because *C. flaccidum* requires both *Pinus* and *Paeonia* spp. to complete its life cycle).

			None expected.	*Prunus* cuttings or tissue cultures from an MPI-accredited offshore facility that has already undergone preliminary quarantine in a higher level of facility.	Material must be from an MPI-accredited offshore facility. Import permit and phytosanitary certificate required. The final stage of PEQ may be done in L1 if all required specific testing has been completed and no regulated pests were found. Material must undergo growing season inspections in a higher level of PEQ before being directed to a L1 facility. Observation during a period of active growth in L1 PEQ is a final measure to verify freedom from all pests and diseases whilst the material is still under official control.
Level 2 (L2)	All organisms contained within L1 PEQ as well as: Insects, or insect vectors excluded by 0.6 mm mesh size (e.g. *Liriomyza* spp., some aphids). Soil or water borne pests or diseases, or organisms vectored by such pests (e.g. *Pratylenchus convallariae*, *Grapevine fanleaf virus*). Bacteria and fungi that are not aerially dispersed. Some other organisms if risk can be managed by a combination of operational and/or physical measures.	Approved countries. Offshore assurances (e.g. growing season inspection, freedom from regulated pests, phytosanitary certification). Import permit required. Treatment on arrival (e.g. for insects, mites, nematodes or fungi). Inspections on arrival and in PEQ. Material obtained from MPI accredited facilities with all	*Liriomyza spp.* (Leaf miner).	*Dianthus caryophyllus* whole plants.	Import permit and phytosanitary certificate required, with an additional declaration to verify that the plants have been inspected and found free from *Liriomyza* spp.
			Grapevine fanleaf virus.	*Vitis* seed.	Import permit and phytosanitary certification required with an additional declaration that the seeds were inspected and found to be free of any visually detectable regulated pests. *Grapevine fanleaf virus* is vectored by the nematode *Xiphinema* spp., so can be adequately contained within a L2 facility. Note: Some other quarantine pests of *Vitis* for which there is evidence of seed transmission are also listed in the seed for sowing IHS. Based on an assessment of the residual risk associated with these organisms that would have been done when the IHS was developed, L2 PEQ is currently considered an appropriate level of quarantine.

		relevant testing done offshore.	*Pratylenchus convallariae* (root lesion nematode).	*Convallaria majalis* whole plants.	Import permit and phytosanitary certification required with an additional declaration that *P. convallariae* (a soil/waterborne nematode) is not known to occur in the country of origin.
			None expected.	*Prunus* cuttings or tissue cultures from an MPI-accredited facility.	Material must be from an MPI-accredited offshore facility. Import permit and phytosanitary certificate required. All required testing should have been completed at an MPI-accredited offshore facility for material to enter this level of facility. Observation during a period of active growth in L2 PEQ is used so that audit testing (and any other testing not completed offshore) can be done if necessary, and as a final measure to verify freedom from all pests and diseases whilst the material is still under official control.
Level 3A (L3A)	All organisms contained within a L1 or L2 facility as well as: Insects excluded by 0.2 mm mesh size; aphids, whiteflies, most thrips, some mites (e.g. Green peach aphid, Melon aphid, Sweetpotato whitefly). Organisms transmitted by a vector capable of being excluded by 0.2 mm mesh size, including some bacteria, phytoplasmas, viroids and viruses e.g. *Plum pox virus* (based on *Myzus*	Approved countries. Offshore assurances (e.g. growing season inspection, freedom from regulated pests, phytosanitary certification. Import permit).	C*ryphonectria parasitica, Phytophthora ramorum, Xylella fastidiosa*.	*Acer* whole plants or cuttings.	Import permit and phytosanitary certificate required. Note: *Acer* is required to enter L3 PEQ under the current nursery stock IHS. However, based on the pests listed opposite and the proposed requirements for L3A facilities, these pests may be able to be contained within a L3A facility. Before material could be directed to a L3A facility the IHS would need to be reviewed and updated to ensure this level of quarantine can adequately manage the risk.

	persicae as the vector, *Liberibacter asiaticum* (based on *Diaphorina citri* as the vector). Mechanically transmitted viruses or viroids, e.g. *Hop stunt viroid*. Bacteria and fungi that are not readily dispersed by wind/aerosol action and/or unlikely to produce fruiting bodies in quarantine e.g. *Elsinoe australis*, *Guignardia citricarpa*. Some other organisms if risk can be managed by a combination of operational and/or physical measures.	Treatment on arrival (e.g. for insects, mites, nematodes or fungi). Inspections on arrival and whilst in PEQ. Additional declarations (e.g. growing season inspection, freedom from regulated pests). Material from accredited facilities. Specific testing for high risk organisms. Specific growth requirements (e.g. minimum growth temperature or day length).	Various, depending on pest biology and testing which has already been completed prior to export.	Plant species obtained from an MPI-accredited facility, where not all testing required in the IHS has been completed prior to export.	Material must be from an MPI-accredited offshore facility. Import permit and phytosanitary certificate required. In cases where all of the required testing has not been completed at the MPI-accredited facility, material may be allowed to enter a L3A facility, depending on which tests have not been completed. Note: The decision to allow material which has not had all testing as required in the IHS completed offshore into L3A PEQ would depend on the types of pest and disease for which testing has not been completed and the confidence MPI has in the facility from which the material is obtained.
			Potato spindle tuber viroid.	*Solanum tuberosum* tissue cultures from a non-accredited facility.	Import permit and phytosanitary certificate required. Note: under the current nursery stock IHS *S. tuberosum* tissue cultures must enter Level 3 quarantine (i.e. L3B of the revised standard). *Potato spindle tuber viroid* is used here as an example of a mechanically transmitted pest that could be adequately contained within a L3A facility (depending on the size of potential aphid vectors). The IHS would need to be reviewed before a decision could be made to direct this type of material to a L3A facility.
Level 3B	All organisms contained within a L1, L2 or L3A facility as well as:	Approved countries. Import permit.	*Puccinia asparagi.*	*Asparagus* whole plants.	Import permit and phytosanitary certificate required.

	Insects and mites excluded by HEPA filtration. Organisms transmitted by a vector excluded by HEPA filtration (e.g. eriophyid mites which vector *Peach mosaic virus* and *Cherry mottle leaf virus*). Bacteria and fungi that are aerially dispersed.	Phytosanitary certificate. Treatment on arrival (e.g. for insects, mites, nematodes or fungi). Growing season inspection in PEQ (by facility operator and MPI Inspector). Specific testing for high risk organisms.	*Monilinia fructigena.*	*Corylus* whole plants.	Import permit and phytosanitary certificate required.
			Pucciniastrum goeppertianum.	*Vaccinium* dormant cuttings.	Import permit and phytosanitary certificate required.
			Physopella ampelopsidis.	*Vitis* dormant cuttings from a non-accredited facility.	Import permit and phytosanitary certificate required.

Proposed changes to physical and structural requirements

44) The proposed physical and structural requirements for the revised levels of quarantine are summarised in Table 2 (full requirements are listed in Parts 2 and 4 of the PEQ standard). Requirements are based on the types of quarantine pest potentially associated with the host plant (as identified in Table 1).

45) Proposed physical and structural changes for each level of facility are summarised below:

Level 1 open field facilities

46) Level 1 (open field) facilities are intended for plant material that may harbour quarantine pests which are unlikely to disperse naturally (e.g. organisms that are solely graft transmitted) and/or which are likely to have a very low impact if they escape from quarantine. Material eligible for Level 1 quarantine is generally restricted to certain species of seed and dormant bulb imported from approved countries.

47) No physical or structural changes are proposed for Level 1 facilities. Proposed operational changes are discussed later in this document.

Level 2 greenhouse facilities

48) Level 2 greenhouse facilities are intended for plant material that may harbour quarantine pests which are likely to have low to moderate impacts should they escape from PEQ. These pests may be naturally dispersed (for example by water, insects or other vectors), but are expected to be adequately contained based on the proposed physical and structural requirements of Level 2 facilities. Material eligible for entry into Level 2 quarantine includes whole plants and cuttings of many ornamental species and some species of dormant bulbs. High value species from certain MPI-approved offshore facilities may also be eligible for entry into Level 2 facilities, although this will be on a case-by-case basis depending on the particular offshore facility and on what testing been completed prior to import. The following physical/structural changes are proposed for Level 2 facilities.

49) Under the current standard, Level 2 facilities can be constructed of single skin polyfilm. In the revised standard it is proposed that a twin skin design or equivalent must be used. This is because polyethylene is more susceptible to damage (e.g. UV degradation, rips and tears) than other materials. MPI inspectors commonly observe holes in single skin facilities, and twin skin polythene provides an extra physical barrier if the integrity of one layer is compromised. Because polyfilm facilities become degraded over time (e.g. by prolonged exposure to sunlight) the revised standard also specifies that polyfilm must be replaced at regular intervals as directed by the MPI Inspector. Replacement will generally be at the end of the service life (as recommended by the manufacturer). However, the MPI Inspector may direct the operator to replace the polyfilm earlier than this if they consider that it is no longer sufficiently structurally sound (for example as may be evident by numerous repairs to the structure, or observed weakness of the polyfilm).

50) MPI recognise that a number of Level 2 facilities are single skinned, and that it may be expensive to retrofit these facilities. As such, provision has been made for polyfilm facilities to be constructed in a way that is considered by MPI to provide a level of physical security that is equivalent to a twin skin design. For example, depending on the particular facility, this could include having a rigid layer along the base of a polyfilm greenhouse (to prevent mechanical damage such as that caused by mowing around the

facility), or by holding plants in a mesh house constructed within a single layer polyfilm facility.

51) It is not clear in the current standard whether facilities may be clad entirely with mesh (i.e. screenhouses); at present the standard requires facilities to be enclosed in 'continuous material'. The revised standard would allow screenhouses to be constructed of mesh with a maximum aperture of 0.6 mm. Screenhouses would be approved on a case by case basis depending on the quarantine pests which could be associated with material to be held in the facility. The mesh size of 0.6 mm is the size currently required for Level 2 facilities; there is no proposal to change the mesh size for Level 2 facilities.

52) The revised standard also proposes that Level 2 facilities must be surrounded on all sides by a buffer strip that is a minimum of 1 metre wide. This buffer strip must either be covered to prevent the growth of plants, must be closely mowed lawn, or must be regularly treated with herbicide to prevent plant growth. This is because plants adjacent to facility may be an alternative host for some pathogens, act as reservoirs for certain viruses and/or viroids, or may conceal the presence of pests or diseases. As such, plants in close proximity to a facility may increase the chances of pests and disease escaping from a facility (for example through breaks in seals or tears in mesh).

Table 2 Summary of proposed levels of quarantine and physical requirements at each level to be included in the revised PEQ standard (changed requirements are in italics).

Current standard	Revised standard
Level 1 • Open field • Clearly delineated • Minimum isolation requirements	**Level 1** • Open field • Clearly delineated • Minimum isolation requirements
Level 2 • Constructed of glass, polyfilm or other continuous material, polyfilm must be a minimum of 200 microns thick • Vents screened by 0.6 mm mesh • Insect proof anteroom • Concrete floor with drainage system connected to sewage, septic tank or rubble drain	**Level 2 greenhouse** • Constructed of glass, polycarbonate, polyfilm or other continuous material, *polyfilm must be twin skinned or equivalent* and a minimum of 200 microns thick • *Screenhouses (with 0.6 mm mesh) allowed on a case-by-case basis.* • Vents screened by 0.6 mm mesh • Insect proof anteroom • Concrete floor with drainage system connected to sewage, septic tank or rubble drain • *Hand washing facilities (hand basins recommended)* • *Benches constructed of dressed and treated timber, metal, or similar inert material* • *Locks fitted to external doors and windows* • *Buffer strip (minimum of 1 metre wide) present on all sides of the facility. Must be covered, closely mowed or treated with herbicide.*
Not applicable	**Level 3A greenhouse** • *Constructed of glass, polycarbonate or other rigid material* • *Vents screened by 0.2 mm mesh* • *Insect proof anteroom* • *Concrete floor with drainage system connected to sewage, septic tank or rubble drain* • *Hand basin with hands free mechanism* • *Mechanical heating and cooling system* • *Locks fitted to external doors* • *Benches constructed of metal or similar inert material* • *Buffer strip (minimum of 1 metre wide) present on all sides of the facility. Must be covered and maintained free from plants.*
Level 3 • Constructed of glass, polythene or other impact resistant material • Vents screened by 0.6 mm mesh • Insect proof anteroom • Concrete floor with drainage system connected to sewage, septic tank or rubble drain	**Level 3B greenhouse** • Constructed of glass, polycarbonate or other rigid material • Concrete floor with drainage system connected to sewage, septic tank or rubble drain • *May require a method of waste water decontamination* • *Mechanically ventilated and fitted with HEPA filtration* • *Negative air pressure must be maintained*

Current standard	Revised standard
	• *Autoclave within facility* • *Hand basin with hands free mechanism* • *Benches constructed of metal or similar inert material* • *Buffer strip (minimum of 1 metre wide) present on all sides of the facility. Must be covered and maintained free from plants.*
Level 2 tissue culture • Must meet the critical service and structural requirements/specifications for a Level 2 quarantine greenhouse/screenhouse	**Level 2 tissue culture** • *Must meet in Physical Containment Level 1 (PC1) requirements of AS/NZS 2243.3:2010 (Safety in laboratories - Microbiological safety and containment).*
Level 3 tissue culture • Must meet the critical service and structural requirements/specifications for a Level 3 quarantine greenhouse/screenhouse	**Level 3 tissue culture** • *Must meet in Physical Containment Level 2 (PC2) requirements of AS/NZS 2243.3:2010 (Safety in laboratories - Microbiological safety and containment).*
Level 2 quarantine aquarium • Each aquarium shall be clear sided and clearly labelled • Each aquarium shall be placed in a watertight tray, the bottom of which shall 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); • Each aquarium shall be inside a building which can be secured; • Each aquarium shall be at least 5m away from a non-quarantine aquarium.	**Level 2 aquarium** • Each aquarium must be clear sided. • Each aquarium must be inside a building which can be secured. • Each aquarium must be at least 5 m away from a non-quarantine aquarium.

53) The revised standard requires hand washing stations to be located in all Level 2 facilities. Washing hands when leaving a facility is an important measure to prevent the spread of any quarantine pests that may be associated with imported material. This is considered particularly relevant for facilities that are located within domestic nurseries because primary or alternate hosts for quarantine pests will likely be present, so any quarantine pests removed from the facility may easily be transferred to non-quarantine plants. Furthermore, many plant species that are held in Level 2 facilities have not been subject to a full risk assessment. As such, there is some unknown risk in terms of pests and diseases that may be associated with these species. Washing hands upon exit is an important operational measure which helps to manage this risk.

54) Alcohol based hand sanitisers were considered as an alternative method of hand decontamination. However, these should not be stored in greenhouses given the potential for the active ingredient to evaporate during periods of high temperature. In addition, alcohol is ineffective when hands are soiled with high amounts of organic matter, may be ineffective against spores, and may have limited effectiveness against viruses. As such, even when used in conjunction with gloves, this is not considered suitable for a high risk pathway such as nursery stock. It is recognised that it may be expensive for some existing facilities to install plumbed in hand basins. As such, although plumbed in basins are ideal, the option is also given for Level 2 facilities to use an alternative method such as a water container with a tap and a bucket placed underneath to catch wash water; wash water could then be disposed of through the drain in the quarantine facility.

Level 3A greenhouse facilities

55) One of the main changes proposed for the revised standard is adding a new level of quarantine (Level 3A), that is an intermediate level of facility between Levels 2 and 3 of the current standard. This will provide more options for containing pests which cannot be contained within a Level 2 facility, but for which the requirements of Level 3B facilities are too stringent.

56) Level 3A facilities are intended for plant material that may harbour quarantine pests that could have moderate to high consequences should they escape from PEQ. These pests may disperse naturally (for example by water, insects or other vectors), but are expected to be adequately contained within a Level 3A facility based on the proposed physical and operational requirements given in the standard. Proposed requirements for Level 3A facilities which differ from Level 2 and/or Level 3B facilities are as follows.

57) Level 3A facilities must be constructed of glass, polycarbonate or other rigid material, with all openings covered by stainless steel mesh. This provides greater physical security relative to Level 2 facilities, and is consistent with the higher degree of risk likely to be associated with material imported into Level 3A facilities.

58) All openings in Level 3A facilities must be covered by stainless steel mesh with a maximum size of 0.2 mm. As identified in Table 3 this will enable the containment of quarantine pests that cannot be held within a Level 2 facility, but for which HEPA filtration (as required for Level 3B facilities) is not necessary. This is important because the costs of constructing and maintaining a facility with HEPA filtration are significantly greater than costs associated with running a facility that would comply with the proposed Level 3A requirements.

Table 3 Summary of mesh sizes proposed for revised levels of quarantine, and types of pests expected to be excluded by each mesh size.

Mesh size (quarantine level)	Examples of pests/vectors excluded*
0.6 x 0.6 mm (Level 2)	Liriomyza leaf miners, some aphids (e.g. Green peach aphid).
0.2 x 0.2 mm (Level 3A)	Aphids (e.g. Green peach and Melon aphid), Whitefly (e.g. Greenhouse, Silverleaf and Sweetpotato whitefly), most thrips and some mites.
HEPA filtration (Level 3B)	All insects and mites, wind dispersed fungal or bacterial spores.

* **Note**: Limited data is available on the size of mesh which is required to exclude different species of quarantine pest. The mesh sizes given for Level 2 and Level 3A facilities refer to the exclusion of adult stages only, and may not exclude eggs and nymphs.

59) A mechanical heating/cooling system is proposed as being mandatory for all Level 3A facilities. This is because pests or diseases which can be adversely affected by high (e.g. viruses, some Liberibacter spp.) or low (e.g. viruses, phytoplasmas and viroids) temperatures may be associated with material held in Level 3A facilities. Temperature control is important for these organisms because if infected plants are not grown at an appropriate temperature it may not be possible to detect them in quarantine. In any case, given the maximum mesh size proposed for Level 3A facilities (0.2 mm), it is likely that any facility constructed according to this specification would need a mechanical ventilation system to maintain appropriate airflow and temperature.

60) All Level 3A facilities must be fitted with a plumbed in hand basin with a hands free mechanism. This reflects the potential for higher risk material to be held in these facilities, and also the fact that these facilities may be required to hold mechanically or touch transmitted pests or diseases (e.g. viroids), which are not likely to be present in a Level 2 facility.

61) Level 3A facilities must be surrounded on all sides by a buffer strip that is a minimum of 1 metre wide. This buffer strip must be covered and maintained free from plants. This is because plants adjacent to facility may be an alternative host for some pathogens, act as reservoirs for certain viruses and/or viroids, or may conceal the presence of pests or diseases; this increases the chances of pests and disease escaping from a facility (for example through breaks in seals).

62) Level 3A facilities are not necessarily intended to be introduced with immediate effect. However, it is anticipated that material will be directed to Level 3A facilities in the future as MPI become more aware of risks associated with different plant species (for example as a result of notification through MPI's emerging risk system, or as new quarantine pests are identified due to the use of more sensitive detection methods). It is important to note that the required level of quarantine is prescribed in the relevant IHS. As such, regardless of any changes that are made to the PEQ standard, the IHS must be updated before the level of quarantine is changed for any plant species. This means that all material currently directed to a Level 2 facility will still be directed to Level 2 PEQ once the revised PEQ standard takes effect. Similarly, any material currently required to enter a Level 3 facility would be directed to a Level 3B facility after the revised PEQ standard is issued.

63) Including an extra level of quarantine may allow some species to be held at a lower level of quarantine than currently specified (i.e. if the risk can be managed within a Level 3A facility instead of a Level 3B facility). Conversely, some material may need to be held in

a higher level of facility (if an assessment shows that the risk could be more appropriately managed in Level 3A quarantine instead of Level 2).

64) Some examples of crops which could be held in Level 3A PEQ include the following:

- *Citrus* spp. (for which specific temperatures ranges are needed to detect the high impact pest *Liberibacter* spp.). Note: *Citrus* from the MPI-accredited offshore facility EMAI in Australia is currently allowed to undergo quarantine in a Level 2 facility that is fitted with a heating/cooling system.

- Plants obtained from MPI accredited offshore facilities where all testing specified in the IHS has not been completed offshore. Examples of species to which this could apply include *Vitis*, *Prunus* and *Malus*. For these species the outcome of Level 3A quarantine could be either that plants can be held in a lower level of quarantine than is currently required (i.e. Level 3A rather than 3B), or in a higher level (Level 3A rather than Level 2), depending on the specific offshore facility. Furthermore, because it is widely recognised that it is imprudent to quarantine high value species in areas where these species are commercially grown, or in domestic nurseries where material is propagated and distributed to commercial plantations, the more stringent structural requirements of Level 3A facilities (i.e. construction using rigid materials and smaller mesh size) may be more appropriate for holding high value crops in such areas.

- Tissue cultures of species which must be deflasked and held in Level 3 quarantine under the current standard. Tissue cultures are widely considered to be lower risk than many other types of plant material. This is because some pests or diseases may not be transferred to tissue culture. As such, a risk analysis may show that Level 3A quarantine is a more appropriate level of quarantine for tissue cultures of high value crops which must currently be held in the highest level of quarantine.

- Ornamental species that currently undergo quarantine in Level 2 facilities if new information becomes available indicating that Level 2 does not adequately manage the risk.

65) The above examples are indicative only, and material could not be directed to a Level 3A facility until a risk assessment had been completed and the relevant IHS amended.

Level 3B greenhouse facilities

66) Level 3B facilities (known as Level 3 facilities in the current standard) are intended for plant material which may harbour quarantine pests that will have serious consequences should they escape from PEQ and for which stringent physical measures are needed to adequately contain the organisms. Material eligible for Level 3B quarantine includes high value crop species that are not obtained from MPI-approved offshore facilities as well as some ornamental or forestry species with particularly high risk or highly mobile pathogens (for example rust diseases). Material from MPI-approved offshore facilities may also require quarantine in a Level 3B facility if all of the required testing is not done prior to import and the material cannot safely be held in a Level 2 or 3A facility.

67) Physical requirements for Level 3B facilities have undergone significant revision. This is because current requirements do not effectively manage the risk associated with the type of organism expected to be contained in Level 3B PEQ. In recognition of the fact that the current standard does not adequately manage the risk, all greenhouse facilities currently registered as Level 3 already meet the physical and structural requirements of either Level 3A or 3B of the revised standard.

68) At present, all vents in Level 3 facilities must be covered with 0.6 mm mesh. However, as identified in Table 3, this will not contain all insects, mites, wind dispersed fungi or bacteria. As such, under the revised standard, all Level 3B facilities must be mechanically ventilated and fitted with HEPA filtration. Negative air pressure must also be maintained to help prevent any small highly mobile quarantine organisms (e.g. spores) that are present in imported plant material from spreading outside the facility.

69) The revised standard requires facilities to have a plumbed in hand basin with a hands free mechanism that must be used by all people upon entering and leaving the facility. An autoclave will also be required within all Level 3B facilities so that any quarantine waste can be treated onsite.

70) The revised standard specifies that facilities may require a method to decontaminate water before release to an external drainage or sewer system. If such a requirement is considered by MPI to be essential to running the facility this will be listed as a condition of the facility approval; this will depend on the types of quarantine pest likely to be associated with material imported into the facility, and also on the method of disposal of liquid waste.

71) Level 3B facilities must be surrounded on all sides by a buffer strip that is a minimum of 1 metre wide. This buffer strip must be covered and maintained free from plants. This is because plants adjacent to facility may be an alternative host for some pathogens, act as reservoirs for certain viruses and/or viroids, or may conceal the presence of pests or diseases; this increases the chances of pests and disease escaping from a facility (for example through breaks in seals).

Level 2 tissue culture laboratory facilities

72) Level 2 tissue culture facilities are intended for plant material that may harbour quarantine pests which are likely to have low to moderate impacts should they escape from PEQ. Such organisms may be naturally dispersed (for example by air, water, insects or other vectors). Material eligible for entry into this level of facility is generally restricted to tissue cultures of ornamental species. In some cases, tissue cultures of plant species that may contain higher risk organisms (e.g. myrtle rust) may also be directed to this level of facility. In such cases, the IHS will specify additional measures to ensure that such pests are adequately contained (for example a requirement that culture vessels must not be opened during the quarantine period).

73) The current standard requires Level 2 tissue culture facilities to comply with structural requirements specified for Level 2 greenhouses. However, because tissue culture facilities are generally situated within laboratories, this requirement has been amended to specify that facilities must be constructed in accordance with Physical Containment Level 1 (PC1) requirements of AS/NZS 2243.3:2010 (Safety in laboratories - Microbiological safety and containment). The requirements of the AS/NZS are considered more appropriate to manage the risk associated with organisms that may be present in tissue cultures eligible for entry into Level 2 tissue culture facilities.

Level 3 tissue culture laboratory facilities

74) Level 3 tissue culture facilities are intended for plant material that may harbour quarantine pests that will have serious consequences if escape occurs. Material eligible for entry into this level of facility generally includes tissue cultures of high value crop species that may be multiplied while plants are undergoing PEQ in a Level 3B greenhouse.

75) The current standard requires Level 3 tissue culture facilities to comply with structural requirements specified for Level 3 greenhouses. However because tissue culture facilities are generally situated within laboratories, this requirement has been amended to specify that facilities must be constructed in accordance with Physical Containment Level 2 (PC2) requirements of AS/NZS 2243.3:2010 (Safety in laboratories - Microbiological safety and containment). The requirements of the AS/NZS are considered more appropriate to manage the risk associated with organisms that may be present in tissue cultures eligible for entry into Level 3 tissue culture facilities.

Level 2 quarantine aquarium facilities

76) This level of facility is intended to hold aquatic plants such as *Anubias* which may be contaminated with organisms such as snails, snail eggs, worms or leeches. The physical and structural requirements of the current standard are considered to adequately manage the risk associated with these organisms, so no physical changes are proposed for this level of facility.

Proposed changes to operational requirements

77) MPI expectations of how facilities should be run have changed since the PEQ standard was issued in 1999. As well as being responsible for meeting all regulatory requirements, operators are also expected to be able to demonstrate how compliance is being effectively met, monitored, assessed and improved. Based on these expectations, there is now a greater reliance on the robustness of internal procedures, including in particular their validation and internal audits. To reflect the change in expectations, new operational requirements are proposed for all levels of quarantine facility as described below. Many of these requirements are already in place for other levels of MPI-approved transitional facility (for example for Transitional Facilities for Biological Products and for General Transitional Facilities for Uncleared Goods).

Operating manual

78) Under the revised standard all PEQ facilities must have an operating manual. This is to demonstrate to MPI how each facility meets the requirements of the standard and to show the procedures that will be used to manage biosecurity risks in the facility. The manual should also provide instructions for facility staff so that they know what is required, what to do and how to do it, as well as identifying what to do and who to contact if something goes wrong.

79) Existing Level 3 facilities must already have operating manuals. For other levels of facility, an example operating manual (for a hypothetical Level 2 facility) has been prepared to show how this is intended to work in practice and to show what sort of operational measures are expected to be put in place by operators. When developing an operating manual, facility operators may choose to use the example manual as a template, or may develop their own manual.

Contingency planning

80) As part of developing the operating manual, contingency plans must be developed for potential breakdowns in containment (for example broken panels within a facility). This is to help ensure that in an emergency biosecurity risks are not inadvertently neglected, and that prompt effective action can be taken to minimise chances of material escaping from the facility.

Operators and Deputy operators

81) When the revised standard takes effect, all operators will be required to undertake an operator training course. The purpose of this is to provide an understanding of biosecurity risks and roles and requirements of PEQ facility operators, including the legal responsibilities of operators. This course will be based on the requirements of a similar course that is run for operators of facilities approved for General Transitional Facilities for Uncleared Goods, and will include describing biosecurity concepts, explaining standards and legislation that must be complied with, and identifying any requirements specific to PEQ facilities.

82) The full content of the course will not be developed until the revised standard has been finalised after this consultation. In the meantime, the MPI workbook for transitional facility operators can be viewed to give an indication of some of the likely content of the training course.

83) As identified in part 1.5.2 of the guidance document that accompanies the standard, someone with overall responsibility for the facility should be available at all times. This

is to ensure that in an emergency all procedures will be correctly followed, and to make certain that any duties of the operator will be done in the operators absence. For some facilities, it may be necessary to appoint a deputy operator who has undertaken the operator training course. In other facilities the operator may be able to nominate someone with sufficient experience to act in the approved operators absence (for example when the operator is on leave). Whether or not a deputy operator is required to do the training course is at the discretion of the MPI inspector and will depend on the particular facility. Leaving this to the inspector is intended to provide more flexibility, in particular for small facilities where it may not be practical or necessary for more than one person to undertake operator training.

Staff training

84) The revised standard specifies that training must be provided for all facility staff and visitors (e.g. contractors or visiting staff). This is to ensure that all people who access the facility have the appropriate knowledge and expertise to fulfil their roles and responsibilities and to meet all biosecurity requirements. The level of training will depend on the roles and responsibilities of a particular person. As such, training of visitors to the facility may be minimal, however training of staff who undertake work in a facility will be much more detailed.

Inspections of facilities and operations

85) Under the revised standard all facilities must be checked by the operator for physical or structural defects at least once per month. This is not required under the current standard, although MPI inspectors frequently identify defects when visiting facilities to carry out plant inspections. The requirement for monthly checks will help to ensure that any non-compliances (for example holes in facilities, missing signage, empty footbaths etc.) do not go unnoticed and are fixed as soon as possible.

86) It is also proposed that an internal audit of each facility must be done at least once every six months. This is to verify that systems are working effectively to manage any biosecurity risk and that all operating procedures (and hence requirements of the standard) are being followed as described in the operating manual. This is also a way for operators to demonstrate that they are complying with the standard.

87) The revised standard allows audit frequency dispensations to be granted to high performing facilities that have an excellent history of compliance with the standard and a demonstrated commitment to good industry practice. Following approval from the MPI inspector, the frequency of external MPI Inspections (audits) can be reduced in six monthly increments up to a frequency of once every two years. This is intended as an incentive for facilities to comply with the standard but will only apply to active facilities that are frequently visited by the MPI Inspector (e.g. at least once every six months) for the purposes of plant inspection.

Plant inspections

88) Under the current standard operators must notify MPI of any pest or disease symptoms that are detected on plants being held in quarantine. However, the standard does not specify how often quarantine material should be inspected for pests and disease. Under the revised standard all plants must be inspected for pests and diseases at least once per week (and up to twice per week for material being held in Level 3A or 3B facilities). This will enable any pests or diseases to be identified as soon as possible, and will help to minimise the chances of quarantine pests escaping from a facility.

Treatments

89) The revised standard includes more requirements around applying treatments to plants in quarantine. In particular, it is now required that any treatments must be applied by an approved treatment technician who has undertaken a recognised training programme (such as that provided by Growsafe). This is to ensure that any treatments are applied in a safe and effective way.

90) The revised standard also permits a single fungicide treatment to be applied to plants on arrival at Level 1 or 2 PEQ facilities. This must be done within 48 hours of material entering the facility. This is proposed because MPI recognise that physical damage arising during transport can lead to opportunistic infection by non-regulated fungi; on arrival treatment may prevent unnecessary plant loss and additional costs associated with diagnosis of such infections.

Keeping track of plant material

91) Some additional information has been included in the revised standard around keeping track of material in quarantine. In particular, unique codes must be assigned to each consignment (or lot) being held in Level 1 or 2 facilities, and to each plant being held in Level 3A or 3B facilities.

Part 4: Implementation of the revised standard

92) The proposed commencement date for the revised standard is 1st March 2016. It is MPI's preference that all facilities should become compliant with the requirements of the revised standard as soon as practicable after the commencement date. However, MPI recognise that in some cases it may take some time to make the required changes, and that some facilities may need to make structural alterations. As such, the following implementation periods will apply:

New facilities:

Any new facilities that commence operations after 1st March 2016 must comply with all requirements of the revised standard from that date.

Existing facilities:

1. Existing facilities must comply with all operational requirements of the revised standard within 12 months of the commencement date (i.e. before 1st March 2017). Operational changes (which include developing an operating manual) are set out in Part 3 and Parts 4.1.2, 4.2.2, 4.3.2, 4.4.2, 4.5.2, 4.6.2 and 4.7.2 of the revised standard (depending on the level of PEQ facility).

2. Existing facilities that are not active (i.e. are not holding quarantine material) at the commencement date must comply with all structural requirements of the revised standard within 12 months of the commencement date (i.e. before 1st March 2017).

3. Existing facilities that are active (i.e. are holding consignments in quarantine) at the date of commencement (1st March 2016) must comply with all physical/structural requirements of the revised standard a maximum of 12 months after the clearance of plant material held in a facility on 1st March 2016. This is to allow any changes that may affect the structural integrity of a facility to be made without compromising biosecurity. However, it is MPI's preference that any physical/structural changes should be made as soon as practicable if this can be done without affecting the integrity of the facility.