



# Import Health Standard

## Seeds for Sowing

155.02.05

20 May 2020

## **TITLE**

Import Health Standard: Seeds for Sowing

## **COMMENCEMENT**

This Import Health Standard comes into force on the date of issue.

## **REVOCATION**

This import health standard revokes and replaces Import Health Standard 155.02.05: Seeds for Sowing, dated 04th day of September 2019.

## **ISSUING AUTHORITY**

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

Dated at Wellington this 20th day of May 2020

Director, Plant & Pathways  
Ministry for Primary Industries  
(acting under delegated authority of the Director-General)

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## Introduction

This introduction is not part of the import health standard (IHS), but is intended to indicate its general effect.

## Purpose

This IHS specifies the requirements for the importation of seeds intended for sowing in New Zealand.

## Background

The New Zealand Biosecurity Act 1993 provides the legal basis for excluding, eradicating and effectively managing pests and unwanted organisms.

Each IHS issued under the Act specifies requirements to be met for the effective management of risks associated with imported goods that may pose a biosecurity threat to New Zealand. This IHS includes requirements that must be met in the exporting country, during transit and importation, and post clearance if specified before biosecurity clearance is given.

Additional information to the requirements is included in guidance text boxes.

## Who should read this import health standard?

This IHS should be read by anyone involved in the process of importing seeds for sowing into New Zealand from all countries and outlines the import requirements that must be met.

Importers of seed for laboratory testing, analysis or research (where biosecurity clearance is not required) should refer to IHS MPI.STD.PLANTMATERIAL: *Dried & Preserved Plant Material, & Fresh Plant Material for Testing, Analysis or Research*.

Products containing viable seed that also contain organic growing media must also meet the requirements of the relevant IHS: MPI.STD.FERTGRO: *Fertilisers and Growing Media of Plant Origin*.

## Why is this important?

It is the importers responsibility to ensure the requirements of this IHS are met. Consignments that do not comply with the requirements of this IHS may not be cleared for entry into New Zealand and /or further information may be sought from importers.

Importers are liable for all associated expenses.

## Equivalence

MPI may consider a pre-export application for an equivalent phytosanitary measure to be approved, different from that provided for in this IHS, if in the opinion of the Director-General, it is considered to be equivalent to the current measures taken for managing the risks associated with the importation of those goods.

Equivalence will be considered with reference to the International Standard for Phytosanitary Measures (ISPM), Publication No. 24: *Guidelines for the determination and recognition of equivalence of phytosanitary measures (2011)*.

## Document history

Refer to Appendix 2 for the amendment record for this IHS.

## Other Information

This is not an exhaustive list of compliance requirements and it is the importer's responsibility to be familiar with and comply with all New Zealand laws.

Listed below are other New Zealand legislative requirements which may also apply to seeds for sowing.

Importers of *Cannabis sativa*, *Lophophora williamsii* and *Papaver somniferum* must contact the Ministry of Health prior to importation for advice on licensing:

Ministry of Health  
PO Box 5013  
Wellington  
Attention: Advisor, Controlled Drug Licensing

Telephone: 04 496 2018

## Part 1: General Requirements

### 1.1 Application

- (1) This import health standard (IHS) applies to viable seed, and products containing viable seed (including pre-germinated seeds as defined in Appendix 1) from species that are listed in the MPI Plant Biosecurity Index, that are imported for the purpose of planting.
- (2) This IHS does not apply to species listed as “requires assessment” or “prohibited entry” in the MPI Plant Biosecurity Index, which are not eligible to be imported under this standard.
- (3) This IHS applies to seed for sowing from any country, unless otherwise specified in Part 2: Specific Requirements.

#### Guidance

- A guide to importing seeds for sowing can be found on the [MPI website](#).

### 1.2 Incorporation of material by reference

- (1) The following documents are incorporated by reference under section 142M of the Act:
  - a) [ISPM 1 Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade](#). Rome, IPPC, FAO;
  - b) [ISPM 4 Requirements for the establishment of pest free areas](#). Rome, IPPC, FAO;
  - c) [ISPM 5 Glossary of phytosanitary terms](#). Rome, IPPC, FAO;
  - d) [ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites](#). Rome, IPPC, FAO;
  - e) [ISPM 12 Guidelines for phytosanitary certificates](#). Rome, IPPC, FAO;
  - f) [ISPM 20 Guidelines for a phytosanitary import regulatory system](#). Rome, IPPC, FAO;
  - g) [ISPM 38 International movement of seeds](#). Rome, IPPC, FAO;
  - h) [MPI Biosecurity Organisms Register for Imported Commodities \(BORIC\)](#);
  - i) [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#);
  - j) [MPI Schedule of Regulated \(Quarantine\) Weed Seeds](#);
  - k) [MPI Plants Biosecurity Index \(PBI\)](#);
  - l) [MPI Protocol for Testing for the Presence of Genetically Modified Plant Material](#);
- (2) Under section 142O(3) of the Act it is declared that section 142O(1) does not apply, that is, a notice under section 142O(2) of the Act is not required to be published before material that amends or replaces any material incorporated by reference has legal effect as part of those documents.

### 1.3 Definitions

- (1) Definitions that apply to this IHS are listed in Appendix 1.

### 1.4 Requirements for seed for sowing

- (1) On arrival in New Zealand, seeds must be made available for inspection and examination by MPI inspectors at the importer's expense.
- (2) Seed for sowing must meet the following requirements:

- a) all seed for sowing must be clearly identified with the scientific name (i.e. genus and species);
  - b) all hybrid species must be clearly identified as hybrid species, and either:
    - i) listed in the MPI Plant Biosecurity Index as hybrid species eligible to be imported; or
    - ii) identified by the scientific names (genus and species) of both parents;
  - c) all packaging associated with seed for sowing must be clean, free from soil and other contaminants;
  - d) all seed for sowing from fleshy fruits (including pods) must have all traces of flesh removed, except:
    - i) Orchidaceae seed (which may be imported in dry/green pods); or
    - ii) when otherwise stated in Part 2: Specific Requirements.
  - e) seed for sowing must be free from the following:
    - i) regulated pest(s) including any quarantine pest(s) as listed in Part 2: Specific Requirements;
    - ii) soil particles greater than 0.1% by weight;
    - iii) unidentified seed;
- (3) Quarantine weed seed contamination must not exceed the MPL of 0.01%. To achieve 95% confidence that the MPL (of 0.01% probability) will not be exceeded, no quarantine weeds seeds are permitted (i.e. acceptance = No. = 0) in a sample(s) drawn and analysed by a MPI – approved method (e.g. ISTA sampling methodology as approved by MPI).

#### Guidance

- Border Clearance requirements for all pellet seeds can be found at [Pelleted and Beta vulgaris - border measures](#).
- If undeclared seeds are detected during inspection the seed consignment will be held until an assessment has been made and MPI determine the biosecurity risk of the seeds.
- The Maximum Pest Limit (MPL) for visually detectable regulated pests on seed for sowing is, at a 95% confidence level, not more than 0.5% of the units in the consignment are infested:
  - this equates to an acceptable level of zero units infested by regulated pests in a sample size of a minimum of 5kg.
- Each line of seed must undergo inspection to verify that the seed and associated documentation is compliant with the requirements of this IHS.
- An officially drawn 5 kilogram sample will be inspected for visually regulated pests from each line (or the whole line if less than 5kg).
- An officially drawn sample will be inspected for contaminants from each line as per MPI current procedures.

#### 1.4.1 Requirements for seed for sowing species listed in the MPI [Plant Biosecurity Index \(PBI\)](#) as "Basic"

- (1) Seed consignments must meet all the requirements of Part 1: General Requirements.

#### Guidance

- In order to facilitate processing, the importer may provide a phytosanitary certificate, which must meet the requirements set under Part 1.5.2 of this IHS.

### 1.4.2 Requirements for seed for sowing listed in the PBI with specific import requirements

- (1) Seed for Sowing under the import specification as "see 155.02.05 under... " must meet all the requirements of Part 1: General Requirements and any specific requirements in Part 2: Specific Requirements.

### 1.4.3 Treatment Requirements

- (1) Any approved phytosanitary treatment, as required in Part 2: Specific Requirements, must be completed either:
  - a) offshore prior to export; or
  - b) on arrival in New Zealand, at an MPI approved facility at the importer's expense.
- (2) If performed offshore, the exporting country NPPO must confirm that any treatment(s) as required in Part 2: Specific Requirements is endorsed in the disinfestation and/or disinfection treatment section of the phytosanitary certificate.

## 1.5 Documentation

### 1.5.1 Permit to Import

- (1) A permit to import is required if specified in
  - a) Part 2: Specific Requirements or,
  - b) seeds are imported as laboratory specimens as per Part 1.8: Seed for sowing imported as laboratory specimens.
- (2) Any permit, as required in Part 2 or Part 1.8, must be presented to MPI at the New Zealand Border together with all other required documentation.

### 1.5.2 Phytosanitary certificate

- (1) A phytosanitary certificate is required if specified in Part 2: Specific Requirements.
- (2) For consignments arriving with a phytosanitary certificate, the phytosanitary certificate must be issued by the exporting country National Plant Protection Organisation (NPPO) in accordance with **ISPM 12: Phytosanitary certificates**.
- (3) The phytosanitary certificate must include any additional declaration(s) required under Part 2: Specific Requirements.
- (4) The phytosanitary certificate must certify that the seed has been inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests and conforms to New Zealand's import requirements.
- (5) If pests are detected that are not listed in this IHS or BORIC, the exporting country NPPO must establish their regulatory status by contacting MPI prior to issuing the certificate.
- (6) The exporting country NPPO must not issue a phytosanitary certificate if a viable regulated pest is detected, unless the consignment is treated in order to eliminate it.
- (7) If the exporting NPPO is satisfied that the pre-shipment inspection activities have been carried out effectively the following declaration, or a variation that is compliant with **ISPM 12: Phytosanitary certificates** and has been approved by MPI prior to shipment must be included on the phytosanitary certificate:

"This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party and to conform with the current

phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.”

### Guidance

#### Phytosanitary certificate

- Information about the regulated pests for New Zealand is available in [BORIC](#).
- The phytosanitary certificate should contain sufficient detail to enable identification of the consignment and its component parts. Information should include:
  - lot number(s);
  - number and description of packages;
  - country/place of origin of the seed; and
  - variety name(s).

#### Seed analysis certificate (SAC)

- In order to facilitate processing, the importer may provide a SAC (original or PDF copy), which must meet the following criteria:
  - be issued by an ISTA or AOSA accredited seed testing station, or an accredited laboratory that follows the ISTA or AOSA methodology;
  - state the actual weight of the sample examined;
  - state the seed lot number and aligns with traceability information on the phytosanitary certificate (for seeds where phytosanitary certificate is presented);
  - be endorsed that the minimum size of the sample examined was as prescribed for the determination of other species by number in ISTA (as published in Seed Science and Technology 24, 1996);
  - state the botanical name of each identified species of seed or nematode gall found in the sample (any unidentified genera or species are to be recorded as such);
  - give the percentage of soil particles present in the sample;
  - certify that no [quarantine weed seeds](#) were present in the sample.

### 1.5.3 Genetically modified testing certificate

- (1) Genetically modified (GM) testing certificates are required for all consignments of *Brassica napus var. oleifera*, *Glycine max*, *Gossypium hirsutum*, *Medicago sativa*, *Petunia*, *Zea mays var. indentata* and *Zea mays var. saccharata*, unless stated in the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material .
- (2) A GM testing certificate is required for *Cucurbita pepo* (see [Cucurbitaceae](#)) and [Linum usitatissimum](#) unless a non-GM declaration is provided.
- (3) GM testing certificates must:
  - a) state the sampling method used for each seed line (e.g. automatic in-line machine);
  - b) contain the same lot number or unique identifier as stated on all the other import documentation for consignments arriving in New Zealand;
- (4) Testing must be conducted by facilities approved by MPI and a copy of the completed test certificate must accompany the consignment imported into New Zealand.
- (5) Importers must provide all test records when required by an MPI inspector.

**Guidance**

- A non-GM declaration template is provided in [Appendix 3](#). Refer to specific requirements for each species in Part 2.
- Complete guidelines for sampling and testing for the presence of GM seeds are specified in the MPI [Protocol](#) for Testing for the Presence of Genetically Modified Plant Material. The MPI [Protocol](#) for Testing for the Presence of Genetically Modified Plant Material and a list of MPI approved facilities for testing for genetically modified plant material can be found on MPI website under [Genetically modified seeds](#).
- MPI will examine the test certificates on arrival to confirm that they reconcile with the actual seed for sowing.
- If consignments arrive at the border without having been tested for the presence of GM seeds, MPI will offer the importer the options of re-shipment, destruction, or having the consignment sampled and tested according to the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material at the importer's expense.
- Any consignment that is found to contain unapproved GM seeds will not be permitted to enter New Zealand and will be re-shipped or destroyed, unless the importer obtains an approval to grow the GM variety from the Environmental Protection Authority (EPA).
- All test results must be available to MPI on request.

## 1.6 Post - entry quarantine

- (1) Seed for sowing must be imported into a post entry quarantine (PEQ) facility if required by Part 2: Specific Requirements.
- (2) The transitional (PEQ) facility must be approved to the MPI Facility Standard: Post Entry Quarantine for Plants (MPI.STD.PEQ).
- (3) Seed for sowing must be actively growing during the quarantine period, and must be tested, treated or inspected for regulated pests at the importer's expense.
- (4) Testing must be undertaken by a diagnostic laboratory approved by MPI to [155.04.03: Standard for Transitional Facilities for the Identification of Organisms](#).

### 1.6.1 Testing

- (1) The unit for testing is defined as an individual seedling and each seedling must be labelled individually and tested separately, unless one of the following methods has been used:
  - a) Polymerase chain reaction:
    - i) samples taken from up to five seedlings of the same species growing in PEQ can be combined to form a single composite sample for pre-determined testing by polymerase chain reaction (PCR).
  - b) Enzyme-linked immunosorbent assay:
    - i) for viruses that are not pollen transmitted, samples taken from up to five seedlings can be combined to form a single composite sample for enzyme-linked immunosorbent assay (ELISA) testing;
    - ii) the phytosanitary certificate must be endorsed with an additional declaration (AD) stating that the seeds have been derived from the same parent plant.
  - c) Graft (woody) indexing:
    - i) where prior permission is received from MPI, samples taken from up to five seedlings can be combined to form a single composite sample for testing by graft indexing;

- ii) the phytosanitary certificate must be endorsed with an AD stating that the seeds have been derived from the same parent plant.

## 1.7 Seed for sowing of New Zealand origin

- (1) Importers must make the seeds and its documentation available for inspection by an MPI inspector.
- (2) Seed for sowing exported from New Zealand, given clearance into the importing country or rejected prior to clearance, may be returned to New Zealand under one of the following circumstances:

### 1.7.1 Seed for sowing unopened offshore:

- (1) Product that remains in its original and unopened packaging must be accompanied with a re-export phytosanitary certificate issued by the NPPO of the overseas country.

### 1.7.2 Seed for sowing opened offshore:

- (1) Seed that has been grown in New Zealand, exported to another country, packaged in that same country and returned to New Zealand, must be accompanied with:
  - a) the original or a copy of the New Zealand issued phytosanitary certificate,
  - b) an export bill of lading; and
  - c) a declaration from the overseas packaging company manager; stating that:
    - i) the re-exported seed is the same seed as covered by the attached phytosanitary certificate and bill of lading; and
    - ii) the quality system used by the company ensures that the seed is not contaminated by any other seed lots, residues from grading or packaging machines, or storage pests.

#### Guidance

- Inspection is required by an MPI inspector to confirm that packaging and labelling is consistent with the documentation provided.

## 1.8 Seed for sowing imported as laboratory specimens

### 1.8.1 Species of Seed listed as 'Basic' in the Plants Biosecurity Index

- (1) A permit to import is not required for seed intended for laboratory testing, analysis or research that is listed with a Seed for Sowing import specification of 'Basic' in the Plants Biosecurity Index.
- (2) All seed must be clearly identified with its scientific name (genus and species) and should be accompanied by a statement stating that 'the seed is being imported for research purposes'.
- (3) Packaging associated with seed must be clean and free from soil and other contaminants.

### 1.8.2 All Other Species of Seed

- (1) Species of seed for sowing listed in the Plants Biosecurity Index as "see 155.02.05 under ....." that do not meet the requirements of the specific schedule within this IHS, may be imported as laboratory specimens for research purposes.
- (2) A request to import must be submitted in the form of a permit to import application. Information must be supplied by the importer to identify how the seed for sowing will be maintained in an MPI-approved transitional or containment facility, which will be identified on the import permit.

- (3) Seed for sowing imported as laboratory specimens, and any material derived from the imported seed will not be eligible for biosecurity clearance.
- (4) Packaging associated with seed must be clean and free from soil and other contaminants.

**Guidance**

- Additional biosecurity requirements will be identified on the import permit.

**1.8.3 Genetically Modified Seeds**

- (1) All Genetically Modified seeds imported as laboratory specimens must:
  - a) be listed under the PBI as “Basic” or as “see 155.02.05 under .....”;
  - b) have an approval under the Hazardous Substances and New Organisms (HSNO) Act 1996 from the Environmental Protection Authority (EPA); and
  - c) have a permit for import issued by MPI.
- (2) All packages must be transported by track and trace system to the containment facility specified on the permit to import.

## Part 2: Specific Requirements

- (1) This part sets out the specific phytosanitary requirements that must be met in addition to Part 1: *General Requirements*, for the following seeds:

<i>Abies</i>	<i>Desmodium</i>	<i>Papaver somniferum</i>
<i>Acer</i>	<i>Echinochloa</i>	<i>Persea</i>
<i>Acrocomia</i>	<i>Elaeis</i>	<i>Petunia</i>
<i>Actinidia</i>	<i>Eriobotrya</i>	<i>Phaseolus</i>
<i>Agropyron</i>	<i>Fagus</i>	<i>Phoenix</i>
<i>Agrostis</i>	<i>Fragaria</i>	<i>Pinus</i>
<i>Apiaceae</i>	<i>Glycine</i>	<i>Pisum</i>
<i>Arabidopsis thaliana</i>	<i>Gossypium</i>	<i>Populus</i>
<i>Avena</i>	<i>Helianthus</i>	<i>Prunus</i>
<i>Beta</i>	<i>Hordeum</i>	<i>Pseudotsuga menziesii</i>
<i>Brassica napus</i>	<i>Humulus</i>	<i>Psophocarpus</i>
<i>Camellia sinensis</i>	<i>Juglans</i>	<i>Pyrus</i>
<i>Camissonia</i>	<i>Lablab</i>	<i>Quercus</i>
<i>Cannabis sativa</i>	<i>Lavandula</i>	<i>Ribes</i>
<i>Capsicum</i>	<i>Lens</i>	<i>Rubus</i>
<i>Carpinus</i>	<i>Linum usitatissimum</i>	<i>Sesamum</i>
<i>Carthamus tinctorius</i>	<i>Lithocarpus densiflorus</i>	<i>Solanum</i>
<i>Carya</i>	<i>Livistona</i>	<i>Solanum lycopersicum</i>
<i>Castanea</i>	<i>Lophophora williamsii</i>	<i>Solanum tuberosum</i>
<i>Cicer</i>	<i>Lotus</i>	<i>Sorghum</i>
<i>Citrus</i>	<i>Macadamia</i>	<i>Stenotaphrum</i>
<i>Cocos</i>	<i>Malus</i>	<i>Trigonella foenum-graecum</i>
<i>Coffea</i>	<i>Mangifera</i>	<i>Triticum</i>
<i>Coriandrum</i>	<i>Medicago</i>	<i>Ulmus</i>
<i>Corylus</i>	<i>Myrtaceae</i>	<i>Vaccinium</i>
<i>Corypha</i>	<i>Nicotiana tabacum</i>	<i>Vicia</i>
<i>Cucurbitaceae</i>	<i>Oxyria</i>	<i>Vigna</i>
<i>Cuminum</i>	<i>Panicum</i>	<i>Vitis</i>
		<i>Zea</i>

## 2.1 *Abies*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed for Sowing as “see 155.02.05 under *Abies*”

**Approved countries:** All

**Quarantine pests:** *Verticillium albo-atrum* [strain]

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.1.1 Approved treatment

- (1) All *Abies* seeds must be treated as per [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#).

### 2.1.2 Phytosanitary certificate

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.2 Acer

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed for Sowing as “see 155.02.05 under *Acer*”

**Approved countries:** All

**Quarantine pests:** None

**Import permit:** Required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.2.1 Approved treatment

- (1) All *Acer* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.2.2 Phytosanitary certificate

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.3 *Acrocomia*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed for Sowing as “see 155.02.05 under *Acrocomia*”

**Approved countries:** All countries except Guam, the Philippines and the Solomon Islands

**Quarantine pests:** *Coconut cadang-cadang viroid*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.3.1 Phytosanitary certificate - Additional declarations

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Acrocomia* seeds have been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands”.

**AND**

- b) “The *Acrocomia* seeds have been sourced from a ‘pest free area’ free from *Coconut cadang-cadang viroid*”.

## 2.4 *Actinidia*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed for Sowing as “see 155.02.05 under *Actinidia*.”

**Approved countries:** All

**Quarantine pests:** *Apple stem grooving virus* [*Actinidia* infecting strain]

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** six months

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.4.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.4.2 Testing requirements

Organism	MPI acceptable detection methods
<i>Apple stem grooving virus</i> [ <i>Actinidia</i> infecting strain]*	ELISA (Bioreba or Loewa) or PCR (Clover et al., 2003) and herbaceous indicators Cq, Nb, Ng, No and Pv.

- (1) Indicator hosts: *Chenopodium quinoa* (Cq), and *Nicotiana benthamiana* (Nb), *N. occidentalis* cv. 37B (No), *N. glutinosa* (Ng) and *Phaseolus vulgaris* cv. Prince (Pv). At least two plants of each indicator species must be used in mechanical inoculation tests.
- (2) Indicator plants must be grown under appropriate temperatures and must be shaded for 12-24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
- (3) Testing must be carried out on *Actinidia* plants while they are in active growth. For bioassay and ELISA, plants shall be sampled from at least two positions on every stem including a young, fully expanded leaflet at the top of the stem and an older leaflet from a midway position.
- (4) PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.
- (5) Positive and negative controls must be used in ELISA tests.
- (6) For ELISA tests, the unit for testing is an individual seedling because of the presence of pollen transmitted viruses for which pre-determined testing is required (denoted by '\*' in the table above).
- (7) Positive and negative controls (including a blank water control) must be used in PCR.
- (8) *Actinidia* plants in a PEQ facility must be inspected for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.

**Guidance**

- Positive internal controls and a negative plant control should be used to provide confidence in testing results.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

**Reference**

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

**Pest List for *Actinidia***

REGULATED PESTS (actionable)

Virus

*Capillovirus*

Apple stem grooving virus [Actinidia infecting strain]

## 2.5 *Agropyron*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed for Sowing as “see 155.02.05 under *Agropyron*.”

**Approved countries:** All

**Quarantine pests:** *Tilletia controversa*, other Ustilaginales, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.5.1 Approved Treatments

- (1) All *Agropyron* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.5.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Agropyron* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Tilletia controversa*”;
  - OR**
  - ii) “sourced from a crop that has been inspected during the growing season according to appropriate procedures and no *Tilletia controversa* was detected”;
  - OR**
  - iii) “had an representative sample of 600 seeds officially drawn in which no spores of *Tilletia controversa* were found”.

### 2.5.3 Testing requirements

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.6 *Agrostis*

The following requirements only apply to species in the Plant Biosecurity listed under Import Specifications for Seed for Sowing as “see 155.02.05 under *Agrostis*.”

**Approved countries:** All

**Quarantine pests:** *Trogoderma* spp., Ustilaginales

**Import permit:** Not Required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.6.1 Approved treatments

- (1) All *Agrostis* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.6.2 Phytosanitary certificate

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.7 *Apiaceae*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Apiaceae*”.

**Approved countries:** All

**Quarantine pests:** ‘*Candidatus Liberibacter solanacearum*’ haplotypes C, D and E

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.7.1 Approved treatment

**If the treatment option is selected:**

- (1) Each seed lot must be treated using a hot water dip prior to shipment, for the treatment of bacterial organisms (‘*Candidatus Liberibacter solanacearum*’ haplotypes C, D and E) as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).
- (2) The hot water treatment is required to be completed offshore prior to export or on arrival in New Zealand.
- (3) Pre-export treatment for each seed lot must be endorsed by the NPPO in the treatment section on the phytosanitary certificate, where the temperature and time must be clearly stated.

### 2.7.2 Phytosanitary certificate – Additional declarations

- (1) The required additional declarations must be endorsed in full on the phytosanitary certificate, no variations in the wording will be accepted by MPI, with exception of translation artifacts.
- (2) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfection and/or disinfection treatment section.
- (3) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) ‘*Candidatus Liberibacter solanacearum*’ haplotypes C, D, and E are absent/not known to occur in \_\_\_\_\_ (name of country).

**OR**

- b) the seeds for sowing have been sourced from a seed lot officially sampled according to ISTA or AOSA methodology, and tested using a NPPO approved PCR method and found free from *Candidatus Liberibacter solanacearum* haplotypes C, D and E.

**OR**

- c) the seeds for sowing have been treated with hot water at a minimum temperature of 50°C for at least 20 continuous minutes.

### 2.7.3 Testing Requirements

**If the testing option is selected:**

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.

- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.
- (3) A representative sample of a minimum of 10,000 seeds, is required from each seed lot and tested using the real-time PCR assay described by Li *et al.*, 2009 to show the consignment is free of '*Candidatus Liberibacter solanacearum*' haplotypes C, D and E.

**Guidance:**

- The hot water treatment is not available in New Zealand and must be completed offshore.
- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**References:**

- Li, W., Abad, J. A., French-Monar, R. D., Rascoe, J., Wen, A., Gudmestad, N. C., Secor, G. A., Lee, I. M., Duan, Y., and Levy, L. 2009. Multiplex real-time PCR for detection, identification and quantification of '*Candidatus Liberibacter solanacearum*' in potato plants with zebra chip. *Journal of Microbiological Methods* 78:59-65.

## 2.8 *Arabidopsis thaliana*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Arabidopsis thaliana*.”

**Approved countries:** All

**Quarantine pests:** None

**Import permit:** See below

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Not required

### 2.8.1 GM seed

- (1) A permit to import is required.
- (2) All GM seed must also be imported in accordance with a HSNO approval.

### 2.8.2 Non-GM seed

- (1) A declaration signed by the exporter and importer must accompany the consignment declaring that the consignment does not contain GM seeds.
- (2) The declaration form is provided in Appendix 3.

## 2.9 Avena

The following requirements only apply to species in the Plant Biosecurity Index listed under import specifications for Seed as “see 155.02.05 under *Avena*”.

**Approved countries:** Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and United States of America.

**Quarantine pests:** Refer to pest list for *Avena*

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.9.1 Approved treatments

- (1) In lieu of pest free area for *Cephalosporium gramineum* the *Avena* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.9.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Avena* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Xanthomonas campestris* pv. *undulosa* and *High plains virus*;

**OR**

  - ii) sourced from a ‘pest free place of production’ free from *Xanthomonas campestris* pv. *undulosa* and *High plains virus*”.
- AND**
- b) “The *Avena* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Anguina tritici*”;

**OR**

  - ii) “sourced from a ‘pest free place of production’ free from *Anguina tritici*”;
- OR**
- iii) “inspected microscopically in accordance with official procedures and *Anguina tritici* was not detected”.
- AND**
- c) “The *Avena* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Cephalosporium gramineum*”;

**OR**

  - ii) “treated with a fungicide combination in MPI approved treatments”.

**Guidance**

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**Pest List for Avena**

## REGULATED PESTS (actionable)

## Insect

## Insecta

## Blattodea

## Blattidae

<i>Blatta orientalis</i>	oriental cockroach
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## Coleoptera

## Bostrichidae

<i>Prostephanus truncatus</i>	larger grain borer
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## Cryptophagidae

<i>Cryptophagus schmidti</i>	
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## Cucujidae

<i>Cathartus quadricollis</i>	squarenecked grain beetle
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## Curculionidae

<i>Caulophilus oryzae</i>	broadnosed grain weevil
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## Dermestidae

<i>Trogoderma granarium</i>	khapra beetle
<i>Trogoderma inclusum</i>	trogoderma beetle
<i>Trogoderma ornatum</i>	trogoderma beetle
<i>Trogoderma simplex</i>	dermestid beetle
<i>Trogoderma sternale</i>	dermestid beetle
<i>Trogoderma variabile</i>	warehouse beetle

## Mycetophagidae

<i>Mycetophagus quadriguttatus</i>	spotted hairy fungus beetle
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## Nitidulidae

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

<i>Gibbium psylloides</i>	shiny spider beetle
<i>Mezium americanum</i>	american spider beetle
<i>Niptus hololeucus</i>	golden spider beetle
<i>Pseudoeurostus hilleri</i>	spider beetle
<i>Ptinus clavipes</i>	brown spider beetle
<i>Ptinus fur</i>	whitemarked spider beetle
<i>Ptinus villiger</i>	hairy spider beetle
<i>Tipnus unicolor</i>	spider beetle
<i>Trigonogenius globulus</i>	

## Tenebrionidae

<i>Alphitobius laevigatus</i>	black fungus beetle
<i>Alphitophagus bifasciatus</i>	two-banded fungus beetle
<i>Blaps mucronata</i>	cellar beetle
<i>Gnatocerus maxillosus</i>	slenderhorned flour beetle
<i>Latheticus oryzae</i>	longheaded flour beetle

		<i>Palorus ratzeburgi</i>	smalleyed flour beetle
		<i>Palorus subdepressus</i>	depressed flour beetle
		<i>Tribolium audax</i>	american black flour beetle
		<i>Tribolium destructor</i>	dark flour beetle
	Trogossitidae		
		<i>Lophocateres pusillus</i>	siamese grain beetle
	Hemiptera		
	Lygaeidae		
		<i>Elasmolomus sordidus</i>	seed bugs
	Lepidoptera		
	Cosmopterigidae		
		<i>Pyroderces rileyi</i>	pink scavenger caterpillar
	Oecophoridae		
		<i>Anchonoma xeraula</i>	grain moth
	Pyralidae		
		<i>Corcyra cephalonica</i>	rice moth
		<i>Ephestia figulilella</i>	raisin moth
		<i>Paralipsa gularis</i>	stored nut moth
	Tineidae		
		<i>Nemapogon variatella</i>	corn moth
Mite			
	Arachnida		
	Acarina		
	Eriophyidae		
		<i>Aceria tosichella</i>	wheat curl mite
		<i>Aceria tulipae [vector]</i>	wheat curl mite
	Siteroptidae		
		<i>Siteroptes cerealium</i>	asparagus spider mite
	Tarsonemidae		
		<i>Steneotarsonemus spirifex</i>	oat spiral mite
Nematode			
	Secernentea		
	Tylenchida		
	Anguinidae		
		<i>Anguina tritici [vector]</i>	seed gall nematode
Fungus			
	Hyphomycetales		
	Moniliaceae		
		<i>Cephalosporium gramineum</i>	
Bacterium			
	Pseudomonadaceae		
		<i>Xanthomonas campestris</i> <i>pv. undulosa</i>	leaf streak

Virus

*High plains virus*

## 2.10 Beta

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Beta*.”

**Approved countries:** All

**Quarantine pests:** *Clavibacter michiganensis* subsp. *sepedonicus*.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.10.1 Phytosanitary certificate - Additional Declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Beta* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Clavibacter michiganensis* subsp. *sepedonicus*;
  - OR**
  - ii) *Clavibacter michiganensis* subsp. *sepedonicus* was not detected in a representative sample of 3200 seeds drawn from this consignment.

### 2.10.2 Testing requirements

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

## 2.11 *Brassica napus*

These requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Brassica napus*”.

**Approved countries:** All

**Quarantine pests:** None

**Import Permit:** Permit not required, unless seeds are to be grown in PEQ.

**PEQ:** Not required, unless imported under options 2.2.2 or 2.2.3 of the MPI [Protocol](#) for Testing for the Presence of Genetically Modified Plant Material.

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.11.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.11.2 GM seed testing

- (1) In addition to the phytosanitary requirements above, all consignments of *Brassica napus* var. *oleifera* (oilseed rape) are required to be representatively sampled, tested, and found to be free of unapproved GM seed according to the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material (refer to Part 1.5.4 *Genetically Modified Testing Certificate*).
- (2) The full scientific name of the *Brassica napus* sub-species or variety, plus the appropriate common name, must be specified on the phytosanitary certificate, e.g. *Brassica napus* var. *biennis* (forage rape) or *Brassica napus* var. *oleifera* (oilseed rape).
- (3) Importers of consignments of *Brassica napus* that are not identified appropriately will be offered the options of re-shipment, destruction or testing for the presence of unapproved GM seeds.

#### Guidance

- Validation of *Brassica napus* varieties - MPI reserves the right to undertake validation audits to confirm that the variety matches that which is stated on the phytosanitary certificate. Audits may be conducted on a random basis and if required, grow out testing of samples will be conducted at an MPI accredited facility at the expense of the importer.
- The MPI Protocol for Testing for the Presence of Genetically Modified Plant Material can be found at <http://www.mpi.govt.nz/document-vault/10250>
- More information on genetically modified seeds can also be found at <https://www.mpi.govt.nz/importing/plants/seeds-for-sowing/genetically-modified-seeds/>

## 2.12 *Camellia sinensis*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Camellia sinensis*”.

**Approved countries:** All

**Quarantine pests:** *Exobasidium vexans*, *Phloem necrosis*

**Import permit:** Required

**PEQ:** Level 1

**Minimum PEQ period:** 1 growing season

**Isolation:** 50m exclusion area

**Phytosanitary certificate:** Required

### 2.12.1 Approved treatments

- (1) All *Camellia sinensis* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.12.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Camellia sinensis* seeds have been sourced from a ‘pest free area’ free from *Exobasidium vexans* and *Phloem necrosis*”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.13 *Camissonia*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Camissonia*”.

**Approved countries:** All

**Quarantine pests:** *Peronospora arthurii*

**Import permit:** Not Required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.13.1 Approved treatments

- (1) All *Camissonia* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.13.2 Phytosanitary certificate

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.14 *Cannabis sativa*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Cannabis sativa*”.

**Approved countries:** All

**Quarantine pests:** Refer to pest list for [Cannabis sativa](#)

**Import permit:** Not Required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### Guidance

- Importers of *Cannabis sativa* must contact the Ministry of Health prior to importation for advice on licensing:  
Ministry of Health  
PO Box 5013  
Wellington  
Attention: Advisor, Controlled Drug Licensing  
Telephone: 04 496 2018

### 2.14.1 Approved treatments

- (1) In lieu of pest free area or pest free place of production for *Pseudomonas syringae* pv. *cannabina* and *Xanthomonas campestris* pv. *cannabis*, the *Cannabis sativa* seeds must be treated using a hot water dip (for bacteria and parasitic weed) prior to shipment or on arrival in New Zealand;
  - a) hot water treatment must be conducted as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).
- (2) In lieu of pest free area for *Leptosphaeria woroninii*, *Septoria cannabis* and *Curvularia cymbopogonis*, the *Cannabis sativa* seeds must be treated with fungicide as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.14.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Cannabis sativa* seeds have been:
    - i) sourced from a ‘pest free area’ free from the named regulated bacteria (*Pseudomonas syringae* pv. *cannabina* and *Xanthomonas campestris* pv. *cannabis*);

**OR**

  - ii) “sourced from a ‘pest free place of production’ free from the named regulated bacteria (*Pseudomonas syringae* pv. *cannabina* and *Xanthomonas campestris* pv. *cannabis*);

**OR**

iii) “treated with hot water treatment in MPI approved treatments”;

**AND**

b) “The *Cannabis sativa* seeds have been:

i) sourced from a ‘pest free area’ free from the named regulated fungi (*Leptosphaeria woroninii*, *Septoria cannabis* and *Curvularia cymbopogonis*);

**OR**

ii) “treated with an approved fungicide combination in MPI approved treatments”.

**AND**

c) “The *Cannabis sativa* seeds have been:

i) sourced from a ‘pest free area’ free from the named regulated viruses (*Hemp mosaic virus* and *Hemp streak virus*);

**OR**

ii) “sourced from a ‘pest free place of production’ free from the named regulated viruses (*Hemp mosaic virus* and *Hemp streak virus*)”.

**Guidance**

- The hot water treatment that would be carried out in New Zealand as an alternative to the same treatment prior to shipment, cannot be permitted as no MPI- approved facility is currently available in New Zealand.
- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**References:**

- Hemp Diseases and Pests: Management and Biological Control. J. M. McPartland, R. C. Clarke and D. P. Watson 2000. CAB International.

**Pest List for *Cannabis***

## REGULATED PESTS (actionable)

## Insect

<i>Pyrrhocoris apterus</i>	fire bug
<i>Episyrphus balteatus</i>	
<i>Ischiodon scutellaris</i>	syrphid fly
<i>Metasyrphus latifasciatus</i>	syrphid fly
<i>Sphaerophoria scripta</i>	hover fly
<i>Syrirta pipiens</i>	hover fly

## Mite

<i>Aculops cannabicola</i>	hemp russett mite
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## Fungus

<i>Curvularia cymbopogonis</i>	
<i>Leptosphaeria woroninii</i>	
<i>Septoria cannabis</i>	yellow leaf spot

## Bacterium

<i>Pseudomonas syringae</i> pv. <i>cannabina</i>	
<i>Xanthomonas campestris</i> pv. <i>cannabis</i>	

## Virus

<i>Hemp mosaic virus</i>	
<i>Hemp streak virus</i>	

## Weed

<i>Orobanche ramosa</i>	branched broomrape
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## 2.15 *Capsicum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Capsicum*”.

**Approved countries:** All

**Quarantine pests:** *Pepper chat fruit viroid*; *Potato spindle tuber viroid*, *Tomato brown rugose fruit virus*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.15.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

“The [*Capsicum annuum*; *C. baccatum*; *C. cardenasii*; *C. chinense*; *C. eximium*; *C. frutescens*; *C. microcarpum*; *C. pendulum*; *C. pubescens*] seeds for sowing have been

- a) For *Potato spindle tuber viroid* (PSTVd):
- i) sourced from (country name) where *Potato spindle tuber viroid* is not known to occur.”

**OR**

- ii) sourced from a ‘pest free place of production’, where parent plants were tested according to a NPPO approved methodology and found free from *Potato spindle tuber viroid*”

**OR**

- iii) officially tested, on a representative sample of a minimum of 3000 seeds officially drawn according to the ISTA or AOSA sampling methodology using an approved PCR NPPO testing method, and found to be free from *Potato spindle tuber viroid*”

**AND**

- b) For *Pepper chat fruit viroid* (PCFVd):
- i) sourced from a ‘pest free area’ free from *Pepper chat fruit viroid*”

**OR**

- ii) *Pepper chat fruit viroid* (PCFVd) is absent/not known to occur in \_\_\_\_\_ (name of country)

**OR**

- iii) sourced from a ‘pest free place of production’ free from *Pepper chat fruit viroid*”

**OR**

- iv) officially tested, on a representative sample of a minimum of 3000 seeds officially drawn according to the ISTA or AOSA sampling methodology using an approved PCR NPPO testing method, and found to be free from *Pepper chat fruit viroid*”

**AND**

- c) For *Tomato brown rugose fruit virus* (ToBRFV):
- i) sourced from 'pest free area', free from *Tomato brown rugose fruit virus*".

**OR**

- ii) sourced from a 'pest free place of production' free from *Tomato brown rugose fruit virus*".

**OR**

- iii) officially tested, on a representative sample of a minimum of 3000 seeds officially drawn according to the ISTA or AOSA sampling methodology, using an NPPO-approved ELISA or NPPO-approved PCR testing method and found free from *Tomato brown rugose fruit virus*".

**2.15.2 Testing requirements**

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.
- (3) Testing on-shore will be performed using an MPI-approved testing method.

**Guidance**

- The ISHI-Veg local lesion bioassay for *Tomato brown rugose fruit virus* is not accepted as a valid test by MPI.
- Additional declarations on phytosanitary certificates to meet the offshore testing requirements for *Tomato brown rugose fruit virus* in Import Health Standard 155.02.05: *Seeds for sowing* should be based only on a negative result obtained in an NPPO-approved ELISA or NPPO-approved PCR test and not on results from a bioassay.

## 2.16 *Carpinus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Carpinus*”.

**Approved countries:** All

**Quarantine pests:** *Cladosporium caryigenum*

**Import permit:** Required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.16.1 Approved treatments

- (1) All *Carpinus* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.16.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Carpinus* seeds have been sourced from an area where *Cladosporium caryigenum* is not known to occur”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.17 *Carthamus tinctorius*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Carthamus tinctorius*”.

**Approved countries:** All

**Quarantine pests:** *Alternaria carthami*, *Cercospora carthami*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.17.1 Approved treatment

- (1) All *Carthamus tinctorius* seeds for sowing must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.17.2 Phytosanitary certificate

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.18 *Carya*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Carya*”.

**Approved countries:** Australia, USA

**Quarantine pests:** *Cladosporium caryigenum*, *Conotrachelus* spp., *Curculiocaryae*, *Cydia caryana*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.18.1 Approved Treatments

- (1) In lieu of pest free area for *Conotrachelus* spp., *Curculio caryae* or *Cydia caryana* all *Carya* seeds must be fumigated (in) as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).
- (2) The *Carya* seeds must be treated with fungicide as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.18.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Carya* seed or nuts have been:
    - i) sourced from an area where they are not known to be attacked by *Conotrachelus* spp., *Curculio caryae* or *Cydia caryana*;

**OR**

  - ii) fumigated with methyl bromide at \_\_\_\_\_ pressure for \_\_\_\_ hours at \_\_\_\_\_ g/m<sup>3</sup> at a temperature of \_\_\_\_\_ C”;
  - iii) the pressure/time/rate temperature combination used is to be in accordance with the scale in [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

**AND**

- b) “The *Carya* seeds or nuts have been sourced from an area where *Cladosporium caryigenum* is not known to occur”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.19 *Castanea*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Castanea*”.

**Approved countries:** All

**Quarantine pests:** *Ceratocystis fagacearum*; *Cryphonectria parasitica*; *Curculio* spp.; *Cyrtopistomus castaneus*

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 2 years

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.19.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Castanea* seeds have been:
    - i) sourced from trees that have been officially inspected and found to be free of diseases caused by *Cryphonectria* spp;
  - OR**
  - ii) sourced from an area where *Cryphonectria parasitica* is known not to occur”.

### 2.19.2 Inspection and testing requirements

Organism	MPI acceptable detection methods
<i>Ceratocystis fagacearum</i>	Growing season inspection in PEQ for disease symptom expression
<i>Cryphonectria parasitica</i>	Growing season inspection in PEQ for disease symptom expression

## 2.20 *Cicer*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Cicer*.”

**Approved countries:** All

**Quarantine pests:** *Ascochyta rabiei*, *Megaselia arietina*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.20.1 Phytosanitary certificate - Additional declaration

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

a) “The *Cicer* seeds have been:

i) sourced from a ‘pest free area’ free from *Ascochyta rabiei*;

**OR**

ii) sourced from a ‘pest free place of production’ free from *Ascochyta rabiei*”.

## 2.21 Citrus

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Citrus*.”

**Approved countries:** Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States of America.

**Quarantine pests:** *Xanthomonas campestris* pv. *citri*, ‘*Candidatus* Liberibacter africanus’, ‘*Candidatus* Liberibacter asiaticus’, ‘*Candidatus* Liberibacter americanus’.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.21.1 Phytosanitary certificate - Additional declarations

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Citrus* seeds have been sourced from an area where *Xanthomonas campestris* pv. *citri* is not known to occur”;

**AND**

- b) “The *Citrus* seeds have been sourced from an area where ‘*Candidatus*’ Liberibacter spp. is not known to occur”.

## 2.22 Cocos

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Cocos*.”

**Approved countries:** All countries except Guam, the Philippines and the Solomon Islands

**Quarantine pests:** *Coconut cadang-cadang viroid*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.22.1 Phytosanitary certificate - Additional declarations

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “*The Cocos* seeds have been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands”

**AND**

- b) “*The Cocos* seeds have been produced in a ‘pest free area’ free from *Coconut cadang-cadang viroid*”.

## 2.23 *Coffea*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Coffea*”.

**Approved countries:** Australia, Cook Islands, Hawaii, Samoa, Tonga

**Quarantine pests:** *Stephanoderes hampei*

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.23.1 Approved treatments

- (1) All *Coffea* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.23.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.24 *Coriandrum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Coriandrum*.”

**Approved countries:** All

**Quarantine pests:** *Ramularia coriandri*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.24.1 Approved treatments

- (1) All *Coriandrum* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.24.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Coriandrum* seeds have been:
    - i) sourced from a ‘pest free area’, free from *Ramularia coriandri*;
  - OR**
  - ii) sourced from a ‘pest free place of production’ free from *Ramularia coriandri*.”

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.25 *Corylus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Corylus*.”

**Approved countries:** All

**Quarantine pests:** *Cydia latiferreana*, *Curculio nucum*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.25.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.25.2 Phytosanitary requirements

- (1) All *Corylus* seeds imported into New Zealand must have their shells removed to permit inspection, prior to entry.

## 2.26 *Corypha*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Corypha*.”

**Approved countries:** All countries except Guam, the Philippines and the Solomon Islands

**Quarantine pests:** *Coconut cadang-cadang viroid*.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.26.1 Phytosanitary certificate - Additional declarations

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Corypha* seeds have been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands”.

**AND**

- b) “The *Corypha* seeds have been produced in a ‘pest free area’ free from *Coconut cadang-cadang viroid*”.

## 2.27 Cucurbitaceae

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Cucurbitaceae*”.

**Approved countries:** All

**Quarantine pests:** *Cucumber green mottle mosaic virus* (CGMMV); *Kyuri green mottle mosaic virus* (KGMMV)

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.27.1 Phytosanitary certificate – Additional declarations

- (1) The required additional declarations must be endorsed in full on the phytosanitary certificate, no variations in the wording will be accepted by MPI, with exception of translation artifacts.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

The [*Benincasa hispida*; *Citrullus lanatus*; *Cucumis anguria*; *Cucumis melo*; *Cucumis metulliferus*; *Cucumis myriocarpus*; *Cucurbita ficifolia*; *Cucurbita maxima*; *Cucurbita mixta* *Cucurbita moschata*; *Cucurbita pepo*; *Cucumis sativus*; *Lagenaria siceraria*; *Luffa acutangula*; *Luffa cylindrical*; *Luffa aegyptiaca*; *Momordica charantia*; *Portulaca oleraceae*] seeds for sowing in this consignment have been:

a) For *Cucumber green mottle mosaic virus* (CGMMV):

i) sourced from a Pest free area, free from the named regulated virus *Cucumber green mottle mosaic virus*;

**OR**

ii) *Cucumber green mottle mosaic virus* (CGMMV) is absent/not known to occur in \_\_\_\_\_ (name of country)

**OR**

iii) sourced from mother plants that were sampled according to a NPPO approved methodology and tested using a NPPO approved ELISA or a NPPO approved PCR method, during the active growing period and found free from *Cucumber green mottle mosaic virus*.

**OR**

iv) sourced from a seed lot officially sampled according to ISTA or AOSA methodology, and tested using the ISTA validated ELISA or a NPPO approved PCR method and found free from *Cucumber green mottle mosaic virus*.

**AND**

b) For *Kyuri green mottle mosaic virus* (KGMMV):

i) sourced from a “Pest free area”, free from *Kyuri green mottle mosaic virus*;

**OR**

- ii) *Kyuri green mottle mosaic virus* (KGMMV) is absent/not known to occur in \_\_\_\_\_ (name of country)

OR

- iii) sourced from a “Pest Free Place of Production”, free from *Kyuri green mottle mosaic virus*;

OR

- iv) sourced from a seed lot officially sampled according to ISTA or AOSA methodology, and tested using a NPPO approved serological (ELISA) or molecular (PCR) method and found free from *Kyuri green mottle mosaic virus*.

### 2.27.2 Testing Requirements

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.
- (3) For seed lots of 10,000 or more seeds:
  - a) A representative sample of a minimum of 2000 seeds, officially drawn according to ISTA or AOSA methodology is required from each seed lot and tested as specified in the schedule;
- (4) For seed lots with less than 10,000 seeds:
  - a) A composite sample of a minimum of 2000 seeds must be officially drawn across all seed lots of the same seed species in a consignment, which must have been produced at the same place of production or production site.
- (5) In order to achieve a composite sample, proportionate sampling must be carried out across all lots imported. A sample of seeds must be drawn from each imported lot within a consignment, adding up to 2000 seeds. The size of the sample from each lot must be proportionate to the size of the imported lot within the consignment.

#### Guidance

- The sample size from each lot should be calculated as follows:
  - a) The proportion of each lot in the total consignment (seed number) is calculated using the following equation:
 
$$\text{Proportion of total consignment size} = \frac{\text{No. of seeds in each lot}}{\text{Total number of seeds in consignment}}$$
  - b) Calculate the sample size for each lot (number of seeds) using a total composite sample size of 2000 seeds:
 
$$\text{Sample size of each line} = 2000 \text{ seeds} \times \text{proportion of total consignment size}$$
  - c) Take the sum of the sample size for each lot to check the total composite sample for the consignment is at least 2000 seeds.

### 2.27.3 Cucurbita pepo

- (1) Different varieties of Yellow Straightneck, Yellow Crookneck squash and Green Zucchini seeds have been genetically modified. The following varieties are prohibited entry to New Zealand without HSNO approval by EPA:
  - a) *Cucurbita pepo* event ZW20;
  - b) *Cucurbita pepo* event CZW3;
  - c) Yellow Crookneck squash variety “Revenue”; “Tigress”; “Destiny III”; Prelude II;

- d) Yellow Straightneck squash variety “XPT1832 III”; “Conqueror III”; “Patriot II”; “Liberator III”;
- e) Green Zucchini variety “SV6009YG”; “Judgement III”; “Justice III”; “Declaration II”; “Independence II”.

(2) *Cucurbita pepo* importers are required to comply with one of the two options listed below:

**Option 1:**

- a) a declaration signed by the exporter and importer must accompany the consignment declaring that the consignment does not contain GM seeds (the declaration form template is provided in Appendix 3).

**OR**

**Option 2:**

- b) a representative sample from each seed lot of *Cucurbita pepo* must be sampled, tested, and found to be free of unapproved GM seed according to the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material (refer to section 1.5.3 *Genetically Modified Testing Certificate*). More information can also be found at <https://www.mpi.govt.nz/importing/plants/seeds-for-sowing/genetically-modified-seeds/>

**Guidance**

- The MPI Protocol for Testing for the Presence of Genetically Modified Plant Material can be found at <http://www.mpi.govt.nz/document-vault/10250>
- The declaration form template is provided in Appendix 3.

**References:**

- Ling et al., 2014. First report of *Cucumber green mottle mosaic virus* infecting greenhouse cucumber in Canada. *Plant Disease* 98 (5): 701-2.
- Reingold et al., 2013. First report of *Cucumber green mottle mosaic virus* (CGMMV) symptoms in watermelon used for the discrimination of non-marketable fruits in Israeli commercial fields. *New Disease Reports* 28, 11.
- ISTA <http://www.seedtest.org/upload/cms/user/SH-07-026-2014.pdf>
- Daryono, B. S., Somowiyarjo, S., Natsuaki, K. T. 2005. Biological and Molecular Characterization of Melon-Infecting *Kyuri Green Mottle Mosaic virus* in Indonesia. *Journal of Phytopathology* 153, 588-595.
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- Hongyun, C., Wendjun, Z., Qinsheng, G. and Shuifang, Z. 2008. Real time TaqMan RT-PCR assay for the detection of *Cucumber green mottle mosaic virus*. *Journal of Virological Methods*, 149 (2): 326-9.
- Kwon, J. Y., Hong, J. S., Kim, M. J., Choi, S. H., Byeong, E. M., Song, E. G., Kim, H. H., Ryu, K. H. 2014. Simultaneous multiplex PCR detection of seven cucurbit infecting viruses. *Journal of Virological Methods* 206, 133-139

**Pest List for *Cucurbitaceae***

REGULATED PESTS (actionable)

Virus

<i>Cucumber green mottle mosaic virus</i>	CGMMV
<i>Kyuri green mottle mosaic virus</i>	KGMMV

## 2.28 *Cuminum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Cuminum*.”

**Approved countries:** All

**Quarantine pests:** *Alternaria burnsii*

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.28.1 Approved treatments

- (1) All *Cuminum* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.28.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Cuminum* seeds have been:
    - i) sourced from a ‘pest free area’, free from *Alternaria burnsii*;
  - OR**
  - ii) sourced from a ‘pest free place of production’, free from *Alternaria burnsii*”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.29 *Desmodium*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Desmodium*.”

**Approved countries:** All

**Quarantine pests:** *Desmodium mosaic virus*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.29.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Desmodium* seeds have been:
    - i) sourced from an area where *Desmodium mosaic virus* is not known to occur;
- OR**
- ii) sourced from a crop that has been inspected during the growing season according to appropriate procedures and no *Desmodium mosaic virus* was detected”.

## 2.30 *Echinochloa*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Echinochloa*.”

**Approved countries:** All

**Quarantine pests:** *Sclerospora graminicola*, *Trogoderma* spp., Ustilaginales

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.30.1 Approved treatments

- (1) All *Echinochloa* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.30.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Echinochloa* seeds have been:
    - i) sourced from a ‘pest free area’, free from *Sclerospora graminicola*;
  - OR**
  - ii) sourced from a ‘pest free place of production’, free from *Sclerospora graminicola*”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.31 *Elaeis*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Elaeis*.”

**Approved countries:** All countries except Guam, the Philippines and the Solomon Islands

**Quarantine pests:** *Coconut cadang-cadang viroid*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.31.1 Phytosanitary certificate - Additional declarations

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Elaeis* seeds have been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands”.

**AND**

- b) “The *Elaeis* seeds have been produced in a ‘pest free area’ free from *Coconut cadang-cadang viroid*”.

## 2.32 *Eriobotrya*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Eriobotrya*.”

**Approved countries:** All

**Quarantine pests:** *Pseudomonas syringae* pv. *erobotryae*

**Import permit:** Required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

(1) Importers must comply with one of the two options listed below:

### 2.32.1 Option 1:

**PEQ:** Not required

#### **Phytosanitary certificate - Additional declarations**

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

a) “the *Eriobotrya* seeds have been sourced from an area where *Pseudomonas syringae* pv. *erobotryae* is not known to occur”.

### 2.32.2 Option 2:

**PEQ:** Level 3B

**Minimum PEQ Period:** 2 growing seasons

#### **Phytosanitary certificate**

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

## 2.33 *Fagus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Fagus*.”

**Approved countries:** All

**Quarantine pests:** *Tortricidae*

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.33.1 Approved treatments

- (1) All *Fagus* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.33.2 Phytosanitary certificate

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.34 *Fragaria*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Fragaria*.”

**Approved countries:** All

**Quarantine pests:** Refer to “Pest List for *Fragaria*.”

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 6 months

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.34.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.34.2 Inspection and testing requirements

Organism	MPI acceptable detection methods
<i>Fragaria chiloensis latent virus</i>	Herbaceous indexing with Cq
<i>Raspberry ringspot virus</i> *	ELISA or PCR and herbaceous indexing with Cq
<i>Strawberry latent ringspot virus</i> *	ELISA or PCR and herbaceous indexing with Cq
<i>Tobacco streak virus</i> *	ELISA or PCR and herbaceous indexing with Cq
<i>Tomato ringspot virus</i> *	ELISA or PCR and herbaceous indexing with Cq

Cq – *Chenopodium quinoa*

- (1) Tests are to be carried out on plants germinated from the imported seeds.
- (2) Testing must be carried out on plants while they are in active growth.
- (3) Indicator plants must be grown under appropriate temperatures.
- (4) Indicator plants must be shaded for 12-24 hrs prior to inoculation.
- (5) Post-inoculated indicator plants must be maintained under appropriate glasshouse conditions for at least 4 weeks.
- (6) Post-inoculated indicator plants must be inspected at least twice per week for signs of virus infection with observations being recorded on a weekly basis.
- (7) For ELISA tests, the unit for testing is an individual seedling because of the presence of pollen transmitted viruses for which pre-determined testing is required (denoted by “\*” in the table above).
- (8) PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.
- (9) Positive, negative, and buffer controls must be used in ELISA tests.
- (10) Positive controls must be used in PCR.

- (11) *Fragaria* plants in a PEQ facility must be inspected for signs of pest and disease at least once per week.

**Guidance**

- Positive internal controls and a negative plant control should be used.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

**Pest List for *Fragaria***

REGULATED PESTS (actionable)

Virus

*Fragaria chiloensis latent virus*

*Raspberry ringspot virus*

*Strawberry latent ringspot virus*  
(strains not in New Zealand)

*Tobacco streak virus*

*Tomato ringspot virus (strains not in New Zealand)*

## 2.35 *Glycine*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Glycine*.”

**Approved countries:** All

**Quarantine pests:** *Peronospora manshurica*, *Trogoderma* spp.

**Import Permit:** Permit not required, unless seeds are to be grown in PEQ.

**PEQ:** Not required, unless imported under options 2.2.2 or 2.2.3 of the MPI [Protocol](#) for Testing for the Presence of Genetically Modified Plant Material.

**Phytosanitary certificate:** Required

### 2.35.1 Approved treatments

- (1) All *Glycine* seeds must be treated as per [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#).

### 2.35.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Glycine* seeds have been:
    - i) inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including *Trogoderma* spp”.

**AND**

- b) “The *Glycine* seeds have been:
  - i) sourced from a ‘pest free area’ free from *Peronospora manshurica*;

**OR**

- ii) sourced from a ‘pest free place of production’ free from *Peronospora manshurica*”.

**AND**

- c) “The *Glycine* seeds have been treated against *Peronospora manshurica* using one of the approved fungicide combinations”.

### 2.35.3 GM seed testing

- (1) In addition to the phytosanitary requirements above, all consignments of *Glycine max* (soybean) are required to be representatively sampled, tested, and found to be free of unapproved GM seed according to the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material (refer to Part 1.5.3: *Genetically Modified Testing Certificate*).

**Guidance**

- The MPI Protocol for testing for the presence of genetically modified plant material can be found at <http://www.mpi.govt.nz/document-vault/10250>
- More information on genetically modified seeds can also be found at <https://www.mpi.govt.nz/importing/plants/seeds-for-sowing/genetically-modified-seeds/>
- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.36 *Gossypium*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Gossypium*.”

**Approved countries:** Australia

**Quarantine pests:** *Anthonomus grandis*, *Trogoderma* spp.

**Import Permit:** Permit not required, unless seeds are to be grown in PEQ.

**PEQ:** Not required, unless imported under options 2.2.2 or 2.2.3 of the MPI [Protocol](#) for Testing for the Presence of Genetically Modified Plant Material.

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.36.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The seed has been cleaned and is completely free of lint”.

### 2.36.2 GM seed testing

- (1) In addition to the phytosanitary requirements above, all consignments of *Gossypium hirsutum* (cotton) are required to be representatively sampled, tested, and found to be free of unapproved GM seed according to the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material (refer to Part 1.5.3: *Genetically Modified Testing Certificate*).
- (2) Importers of consignments of *Gossypium hirsutum* that are not identified appropriately will be offered the options of re-shipment, destruction or testing for the presence of unapproved GM seeds.

## 2.37 *Helianthus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Helianthus*.”

**Approved countries:** Australia, Austria, Belgium, Canada, Chile, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States of America

**Quarantine pests:** *Alternaria helianthi*, *Neolasioptera helianthi* (*syn. Lasioptera murfeldiana*), *Plasmopara halstedii*, *Septoria helianthi*, Sunflower mosaic virus, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.37.1 Approved treatments

- (1) All *Helianthus* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.37.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfection and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Helianthus* seeds have been sourced from a crop that has been inspected during the growing season according to appropriate procedures and no *Alternaria helianthi*, *Neolasioptera helianthi*, *Plasmopara halstedii*, *Septoria helianthi* or *Sunflower mosaic virus* was detected;
- OR**
- b) “The *Helianthus* seeds have been sourced from an area where *Alternaria helianthi*, *Neolasioptera helianthi*, *Plasmopara halstedii*, *Septoria helianthi* and *Sunflower mosaic virus* are not known to occur”;
- OR**
- c) “The *Helianthus* seeds have:
- i) been sourced from a crop that has been inspected during the growing season according to appropriate procedures and no *Neolasioptera helianthi*, *Plasmopara halstedii* or *Sunflower mosaic virus* was detected;
- AND**
- ii) had 600 pure seeds drawn and tested in accordance with the general directions for seed health testing in the current International Rules for Seed Testing and no evidence of contamination with *Alternaria helianthi* or *Septoria helianthi* was found”.

**Guidance**

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**Pest List for *Helianthus***

## REGULATED PESTS (actionable)

## Insect

## Insecta

## Coleoptera

## Dermestidae

*Trogoderma granarium*

khapra beetle

*Trogoderma variabile*

warehouse beetle

## Diptera

## Asteraceae

*Neolasioptera helianthi*

midge

*(syn. Lasioptera murfeldtiana)*

## Fungus

## Ascomycota

## Pleosporales

## Pleosporaceae

*Alternaria helianthi*

## Dothideales

## Leptosphaeriaceae

*Leptosphaeria lindquistii*

leaf spot

## Mitosporic fungi (Coelomycetes)

## Sphaeropsidales

## Sphaerioidaceae

*Septoria helianthi*

septoria leaf spot

Mitosporic fungi (*Hyphomycetes*)

## Hyphomycetales

## Moniliaceae

*Aspergillus parasiticus*

mould

## Oomycota

## Peronosporales

## Peronosporaceae

*Plasmopara halstedii*

downy mildew

## Bacterium

## Pseudomonadaceae

*Pseudomonas syringae* pv.  
*aptata*

bacterial spot

*Pseudomonas syringae* pv.  
*tagetis*

bacterial leaf spot

## Virus

## Potyviridae

## Potyvirus

*Sunflower mosaic virus*

## 2.38 *Hordeum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Hordeum*.”

**Approved countries:** Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and United States of America

**Quarantine pests:** Refer to “Pest List for *Hordeum*”

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.38.1 Approved treatments

- (1) In lieu of pest free area for *Cephalosporium gramineum* and *Fusarium longipes* all *Hordeum* seed for sowing seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.38.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) "The *Hordeum* seeds have been:
    - i) sourced from a ‘pest free area’ free from the named regulated bacteria (*Pseudomonas syringae* pv. *striafaciens*, *Rathayibacter tritici*, *Xanthomonas campestris* pv. *undulosa*) and virus (*High plains virus*);

**OR**

  - ii) sourced from a ‘pest free place of production’ free from the named regulated bacteria (*Pseudomonas syringae* pv. *striafaciens*, *Rathayibacter tritici*, *Xanthomonas campestris* pv. *undulosa*) and virus (*High plains virus*);
- AND**
- b) "The *Hordeum* seeds have been:
  - i) sourced from a “pest free area” free from the named regulated fungi (*Cephalosporium gramineum*, *Fusarium longipes*);

**OR**

- ii) “treated with one of the fungicide combinations in MPI approved treatments”;

**AND**

- c) "The *Hordeum* seeds have been:
  - i) sourced from a ‘pest free area’ free from *Tilletia controversa*”;

**OR**

- ii) "sourced from a 'pest free place of production' free from *Tilletia controversa*, and treated with one of the fungicide combinations in MPI approved treatments";

**OR**

- iii) "had a representative sample of 600 seeds drawn from this consignment according to the International Seed Testing Association's methodology and have been tested for *Tilletia controversa*, and treated with one of the fungicide combinations in MPI approved treatments."

### **2.38.3 Testing requirements for *Tilletia controversa***

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

#### **Guidance**

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**Pest list for *Hordeum***

## REGULATED PESTS (actionable)

## Insect

*Insecta*

## Blattodea

## Blattidae

*Blatta orientalis*

oriental cockroach

*Coleoptera*

## Curculionidae

*Caulophilus oryzae*

broadnosed grain weevil

## Dermestidae

*Trogoderma granarium*

khapra beetle

*Trogoderma grassmani*

trogoderma beetle

*Trogoderma inclusum*

trogoderma beetle

*Trogoderma irroratum*

trogoderma beetle

*Trogoderma ornatum*

trogoderma beetle

*Trogoderma simplex*

dermestid beetle

*Trogoderma sternale*

dermestid beetle

*Trogoderma variabile*

warehouse beetle

## Languriidae

*Pharaxonotha kirschii*

mexican grain beetle

## Tenebrionidae

*Embaphion muricatum*

false wireworm

*Latheticus oryzae*

longheaded flour beetle

*Palorus ratzeburgi*

smalleyed flour beetle

*Palorus subdepressus*

depressed flour beetle

*Tribolium audax*

american black flour beetle

*Tribolium destructor*

dark flour beetle

*Lepidoptera*

## Tineidae

*Haplotinea insectella*

casemaking moth

*Tinea fictrix*

casemaking moth

## Mite

## Arachnida

## Acarina

## Acaridae

*Acarophenax tribolii* [Animals  
Biosecurity]

grain mite

## Eriophyidae

*Aceria tosichella*

wheat curl mite

*Aceria tulipae* [vector]

wheat curl mite

## Pyemotidae

*Pyemotes herfsi*

straw itch mite

## Fungus

Basidiomycota: Ustomycetes		
	Tilletiaceae	
	<i>Tilletia controversa</i>	dwarf bunt
Mitosporic fungi (Hyphomycetes)		
	Hyphomycetales	
	Moniliaceae	
	<i>Cephalosporium gramineum</i>	stripe
	Tuberculariales	
	Tuberculariaceae	
	<i>Fusarium longipes</i>	fusarium head blight
Bacterium		
	Corynebacteriaceae	
	<i>Rathayibacter tritici</i>	yellow ear rot
	Pseudomonadaceae	
	<i>Pseudomonas syringae</i> pv. <i>striaefaciens</i>	bacterial stripe blight
	<i>Xanthomonas campestris</i> pv. <i>undulosa</i>	leaf streak
Virus		
	<i>High plains virus</i>	

## 2.39 *Humulus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Humulus lupulus*.”

**Approved countries:** All

**Quarantine pests:** *Pseudoperonospora humuli*, *Verticillium albo-atrum*

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ Period:** 1 growing season

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.39.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

## 2.40 *Juglans*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Juglans*.”

**Approved countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Mexico, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States of America

**Quarantine pests:** *Gnomonia leptostyla*, Pyralidae; Tortricidae; *Trogoderma* spp., *Cherry leaf roll virus*

**Import permit:** Required

**PEQ:** Level 1

**Minimum PEQ Period:** 2 growing seasons

**Isolation:** 50m exclusion area

**Phytosanitary certificate:** Required

### 2.40.1 Approved treatments

- (1) All *Juglans* seeds must be fumigated as per [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#).

### 2.40.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Juglans* seed have been:
    - i) inspected during the growing season according to appropriate procedures, and no *Gnomonia leptostyla* or *Cherry leaf roll virus* was detected;

**OR**

  - ii) sourced from an area where *Gnomonia leptostyla* and *Cherry leaf roll virus* are not known to occur”.

**AND**

- b) “The seed was fumigated with methyl bromide at \_\_\_ pressure for \_\_\_ hours at \_\_\_ g/m<sup>3</sup> at a temperature of \_\_\_ °C”;

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.41 *Lablab*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Lablab*”.

**Approved countries:** All

**Quarantine pests:** *Earias vitella*, *Maruca testulali*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

**For seed in pods:**

### 2.41.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The pods were inspected before export and no caterpillars of *Earias vitella* or *Maruca testulalis* were found in a 600 unit sample”.

## 2.42 *Lavandula*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under under *Lavandula*.”

**Approved countries:** All

**Quarantine pests:** *Coniothyrium lavandulae*, *Phoma lavandulae*

**Import permit:** Not Required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.42.1 Approved treatments

- (1) All *Lavandula* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.42.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Lavandula* seeds have been:
    - i) sourced from a ‘pest free area’, free from *Coniothyrium lavandulae* and *Phoma lavandulae*
  - OR**
  - ii) sourced from a ‘pest free place of production’, free from *Coniothyrium lavandulae* or *Phoma lavandulae*”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.43 *Lens*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Lens*.”

**Approved countries:** All

**Quarantine pests:** *Trogoderma granarium*

**Import permit:** Not Required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.43.1 Phytosanitary certificate - Additional declaration

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Lens* seeds been inspected in accordance with appropriate official procedures and found to be free of *Trogoderma granarium*”.

**OR**

- b) “*Trogoderma granarium*” is absent/not known to occur in \_\_\_\_\_(name of country)

## 2.44 *Linum usitatissimum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Linum usitatissimum*.”

**Approved countries:** All

**Quarantine pests:** None

**Import permit:** Permit not required

**PEQ:** Not required.

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.44.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.44.2 GM seed declaration

- (1) There are no specific requirements for *Linum usitatissimum* seeds except for the following GM event which is prohibited entry to New Zealand without HSNO approval by the EPA:
  - a) *Linum usitatissimum* var. FP967 (CDC Triffid).
- (2) Importers are required to comply with one of the two options listed below:

Option 1:

- a) a declaration signed by the exporter and importer must accompany the consignment declaring that the consignment does not contain GM seeds (refer to Appendix 3: Declaration form ).

Option 2:

- b) samples must be representatively sampled, tested, and found to be free of unapproved GM seed according to the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material (refer to Part 1.5.3: *Genetically Modified Testing Certificate*).

## 2.45 *Lithocarpus densiflorus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Lithocarpus densiflorus*.”

**Approved countries:** Australia, Canada, Germany, India, Israel, Japan, Mexico, Tunisia, United Kingdom, United States of America

**Quarantine pests:** *Ceratocystis fagacearum*, Tortricidae

**Import permit:** Required

**PEQ:** Level 1

**Isolation:** 50 m

**Phytosanitary certificate:** Required

### 2.45.1 Approved Treatments

- (1) All *Lithocarpus densiflorus* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.45.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Lithocarpus densiflorus* seed has been:
    - i) collected from trees that have been officially inspected for disease caused by *Ceratocystis fagacearum* and no disease was detected;
  - OR**
  - ii) sourced from an area where *Ceratocystis fagacearum* is not known to occur”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.46 *Livistona*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Livistona*.”

**Approved countries:** All countries except Guam, the Philippines and the Solomon Islands

**Quarantine pests:** *Coconut cadang-cadang viroid*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.46.1 Phytosanitary certificate - Additional declarations

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Livistona* seeds have been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands”.

**AND**

- b) “The *Livistona* seeds have been sourced from a ‘pest free area’ free from *Coconut cadang-cadang viroid*”.

## 2.47 *Lophophora williamsii*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Lophophora williamsii*.”

**Approved countries:** All

**Quarantine pests:** None

**Import permit:** Required

**PEQ:** Not required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.47.1 Phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Importers of *Lophophora williamsii* must contact the Ministry of Health prior to importation for advice on licensing:  
Ministry of Health  
PO Box 5013  
Wellington  
Attention: Advisor, Controlled Drug Licensing  
Telephone: 04 496 2018

## 2.48 *Lotus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Lotus*.”

**Approved Countries:** All

**Quarantine pests:** *Cercospora loti*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.48.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Lotus* seed has been:
    - i) sourced from from a crop that has been inspected during the growing season according to appropriate procedures and no *Cercospora loti* was detected;
- OR**
- ii) sourced from an area where *Cercospora loti* is not known to occur”.

## 2.49 *Macadamia*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Macadamia*.”

**Approved countries:** All

**Quarantine pests:** *Cryptophlebia ombrodelta*, *Deudorix epijarbas*, *Dichocrocis punctiferalis*

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.49.1 Approved treatments

- (1) All *Macadamia* seeds must be fumigated as per [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#).

### 2.49.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.
  - a) “The *Macadamia* seed was fumigated with methyl bromide at \_\_\_\_\_ pressure for \_\_\_\_ hours at \_\_\_\_ g/m<sup>3</sup> at a temperature of \_\_\_\_ °C “;

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.50 *Malus*

These requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Malus*.”

**Approved countries:** All

**Quarantine pests:** *Apple scar skin viroid*, *Monilinia fructigena*, *Tomato bushy stunt virus*

**Import permit:** Required

**PEQ:** Level 2. Herbaceous indexing and PCR testing must be completed, and if seedlings have tested negative, they may be transferred to Level 1 PEQ for woody indexing.

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.50.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.50.2 Inspection and testing requirements

Organism	MPI acceptable detection methods (listed below)
<i>Apple scar skin viroid</i>	PCR and woody indexing
<i>Monilinia fructigena</i>	Growing season inspection in PEQ for disease symptom expression
<i>Tomato bushy stunt virus</i>	PCR and herbaceous Indexing

- (1) Tests are to be carried out on plants germinated from the imported seeds.
- (2) The quarantine period will begin once the plants have entered a period of active growth and have two fully expanded leaves.
- (3) Virus testing is to be conducted on new spring growth. Viroid testing is to be done during the summer period. For each *Malus* plant, at least two fully-expanded leaves must be sampled from different branches of the main stem, one a younger leaf and one an older leaf.
- (4) Polymerase chain reaction (PCR) tests. All PCR tests must be validated using positive and negative controls prior to use in quarantine testing. Positive and negative controls must be used in all tests. Internal control primers to check the PCR competency of the samples and a negative plant control should also be used in PCR tests.
- (5) Herbaceous indexing will use the indicators *Chenopodium quinoa* and *Nicotiana clevelandii* (Nc).
- (6) Woody Indexing will use one of the indicators *Malus x domestica* ‘Golden Delicious’ or ‘Red Delicious’ Delicious’.
- (7) Inspection of the *Malus* plants by the Operator of the PEQ facility for signs of pest and disease must be at least twice per week for the first 3 months of active growth, and during spring and autumn. All other times of active growth (summer), plants should be inspected once per week. A record of inspections carried out by the Operator is to be kept and made available to the MPI Inspector on request.

**Guidance**

- Seedlings will be inspected and tested for regulated pests at the expense of the importer. The quarantine period may be extended if material is slow growing, pests are detected, or further testing is required.
- Positive internal controls and a negative plant control should be used.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

## 2.51 *Mangifera*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Mangifera*.”

**Approved countries:** All

**Quarantine pests:** *Sternochetus mangiferae*, *Xanthomonas campestris* pv. *mangiferae-indicae*

**Import permit:** Required

**PEQ:** Level 1

**Minimum period:** 2 growing seasons

**Isolation:** 50 m exclusion area

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.51.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Mangifera* seeds have been collected from trees which were inspected during the growing season and *Xanthomonas campestris* pv. *mangiferae-indicae* was not detected”.

## 2.52 *Medicago*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Medicago*.”

**Approved countries:** All

**Quarantine pests:** *Pea early browning virus*, *Peanut stunt virus*, *Trogoderma granarium*, *Xanthomonas campestris* pv. *alfalfae*.

**Import Permit:** Permit not required, unless seeds are to be grown in PEQ.

**PEQ:** Not required, unless imported under options 2.2.2 or 2.2.3 of the MPI [Protocol](#) for Testing for the Presence of Genetically Modified Plant Material.

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.52.1 Phytosanitary certificate - Additional declarations

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Medicago* seeds have been inspected in accordance with appropriate official procedures and found to be free of *Trogoderma granarium*”.
- OR**
- b) “*Trogoderma granarium*” is absent/not known to occur in \_\_\_\_\_ (name of country)
- AND**
- c) “The *Medicago* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Pea early browning virus*, *Peanut stunt virus* and *Xanthomonas campestris* pv. *alfalfae*;
- OR**
- ii) sourced from a ‘pest free place of production’ free from *Pea early browning virus*, *Peanut stunt virus* and *Xanthomonas campestris* pv. *alfalfae*”.

### 2.52.2 GM seed testing

- (1) In addition to the phytosanitary requirements above, all consignments of *Medicago sativa* (lucerne/alfalfa) are required to be representatively sampled, tested, and found to be free of unapproved GM seed according to the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material (refer to Part 1.5. 3: *Genetically Modified Testing Certificate*).

#### Guidance

- The MPI Protocol for Testing for the Presence of Genetically Modified Plant Material can be found at <http://www.mpi.govt.nz/document-vault/10250>
- More information on genetically modified seeds can also be found at <https://www.mpi.govt.nz/importing/plants/seeds-for-sowing/genetically-modified-seeds/>

## 2.53 *Myrtaceae*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed for Sowing IHS “see 155.02.05 under *Myrtaceae*”.

**Approved countries:** All

**Quarantine pests:** *Austropuccinia psidii* (formerly *Puccinia psidii* or *Uredo rangalii*)

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.53.1 Approved treatments

- (1) In lieu of country freedom for *Austropuccinia psidii* all *Myrtaceae* seeds must be treated as per [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#).

### 2.53.2 Phytosanitary certificate – Additional declarations

- (1) The required additional declarations must be endorsed in full on the phytosanitary certificate, no variations in the wording will be accepted by MPI, with exception of translation artefacts.
- (2) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (3) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this Import Health Standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “*Austropuccinia psidii* is absent in \_\_\_\_\_ (name of country)”

OR

- b) The *Myrtaceae* seeds must be treated with one of the approved fungicide combinations as per MPI Standard [MPI-STD-ATBRT Approved Biosecurity Treatments](#).

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.54 *Nicotiana tabacum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Nicotiana tabacum*.”

**Approved countries:** All

**Quarantine pests:** *Peronospora tabacina*

**Phytosanitary certificate:** Required

(1) Importers must comply with one of the three options listed below:

### 2.54.1 Option 1: Offshore measure

**Import Permit:** Not required

**PEQ:** Not required

**Approved treatment**

- a) All *Nicotiana tabacum* seeds must be treated as per [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#).

**Phytosanitary certificate – Additional declarations:**

- a) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- b) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration to the phytosanitary certificate:
- i) “The *Nicotiana tabacum* seed in this consignment have been inspected during the growing season and no *Peronospora tabacini* was detected”;

**OR**

- ii) “sourced from an area where *Peronospora tabacini* is not known to occur”.

### 2.54.2 Option 2: Onshore measure

**Import Permit:** Not required

**PEQ:** Not required

**Approved treatment**

- a) All *Nicotiana tabacum* seeds must be treated as per [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#).

**Phytosanitary certificate**

- a) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

**Phytosanitary requirements**

- a) All seeds must be imported untreated and tested at an MPI-approved testing laboratory for *Peronospora tabacini* prior to any treatment occurring.
- b) Only seeds tested and found free from *Peronospora tabacini* will be treated with one of the fungicide combinations in the MPI approved treatments prior to biosecurity clearance.

**2.54.3 Option 3: Onshore measure****Import Permit:** Required**PEQ:** Level 3B**Minimum PEQ period:** 1 growing season**Approved treatment:** Not required**Phytosanitary certificate**

- a) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

**Guidance**

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.55 *Oxyria*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Oxyria*.”

**Approved countries:** All

**Quarantine pests:** *Ustilago vinosa*

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.55.1 Approved treatments

- (1) All *Oxyria* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.55.2 Phytosanitary certificate

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.56 *Panicum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Panicum*.”

**Approved countries:** All

**Quarantine pests:** *Peronosclerospora sorghi*, *Sclerospora graminicola*, *Trogoderma* spp., Ustilaginales

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.56.1 Approved treatments

- (1) All *Panicum* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.56.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Panicum* seed has been:
    - i) sourced from a ‘pest free area’, free from *Peronosclerospora sorghi* and *Sclerospora graminicola*;
  - OR**
  - ii) sourced from a ‘pest free place of production’, free from *Peronosclerospora sorghi* and *Sclerospora graminicola*”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.57 *Papaver somniferum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Papaver somniferum*.”

**Approved countries:** All

**Quarantine pests:** None

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.57.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

#### Guidance

- Importers of *Papaver somniferum* must obtain written approval from the Ministry of Health prior to importation.  
Ministry of Health  
PO Box 5013  
Wellington  
Attention: Advisor, Controlled Drug Licensing

## 2.58 *Persea*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Persea*”.

**Approved countries:** USA

**Quarantine pests:** *Avocado sunblotch viroid*, Blackstreak

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 1 growing season

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.58.1 Phytosanitary certificate

- (1) If satisfied the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

## 2.59 *Petunia*

These requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Petunia*”.

**Approved countries:** All

**Quarantine pests:** None

**Import Permit:** Permit not required, unless seeds are to be grown in PEQ.

**PEQ:** Not required, unless imported under options 2.2.2 or 2.2.3 of the MPI [Protocol](#) for Testing for the Presence of Genetically Modified Plant Material.

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.59.1 Phytosanitary requirements

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.
- (2) The full scientific name of the *Petunia* species and variety must be specified on the phytosanitary certificate.

### 2.59.2 GM seed testing

- (1) For all lots of *Petunia*, in addition to the phytosanitary requirements above, importers are required to comply with **one of** the two options listed below:

Option 1:

- a) a declaration signed by the exporter and importer must accompany the consignment declaring that the consignment does not contain GM seeds (refer to Appendix 3: Declaration form).

Option 2:

- a) samples from each lot must be representatively sampled, tested, and found to be free of unapproved GM seed according to the MPI Protocol for Testing for the Presence of Genetically Modified Plant Material (refer to Part 1.5.3: Genetically Modified Testing Certificate). Every lot tested must be specified on the testing certificate.

#### Guidance

- The MPI Protocol for Testing for the Presence of Genetically Modified Plant Material can be found at <http://www.mpi.govt.nz/document-vault/10250>
- More information on genetically modified seeds can also be found at <https://www.mpi.govt.nz/importing/plants/seeds-for-sowing/genetically-modified-seeds/>

## 2.60 *Phaseolus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Phaseolus*.”

**Approved countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, United Kingdom and United States of America.

**Quarantine pests:** Refer to “Pest List for *Phaseolus*”.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.60.1 Approved treatments

- (1) In lieu of pest free area for *Cochliobolus miyabeanus*, *Elsinoe phaseoli*, and *Phoma exigua* var. *diversispora* all *Phaseolus* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.60.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfection and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

a) “The *Phaseolus* seeds have been:

- i) sourced from a ‘pest free area’ free from the named regulated bacteria (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*) and viruses (*Artichoke yellow ringspot virus*, *Bean common mosaic virus* [blackeye cowpea mosaic strain], *Broad bean mottle virus*, *Cowpea severe mosaic virus*, *Pea early-browning virus*, *Peanut mottle virus*, *Peanut stunt virus*, *Southern bean mosaic virus*);

**OR**

- ii) sourced from a ‘pest free place of production’ free from the named regulated bacteria (*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*) and viruses (*Artichoke yellow ringspot virus*, *Bean common mosaic virus* [blackeye cowpea mosaic strain], *Broad bean mottle virus*, *Cowpea severe mosaic virus*, *Pea early-browning virus*, *Peanut mottle virus*, *Peanut stunt virus*, *Southern bean mosaic virus*);

**AND**

b) “The *Phaseolus* seeds have been:

- i) sourced from a ‘pest free area’ free from the named regulated fungi (*Cochliobolus miyabeanus*, *Elsinoe phaseoli*, *Phoma exigua* var. *diversispora*);

**OR**

- ii) “treated with one of the fungicide combinations in MPI approved treatments”.

**Guidance**

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**Pest list for *Phaseolus***

## REGULATED PESTS (actionable)

## Insect

## Insecta

## Coleoptera

## Bostrichidae

*Prostephanus truncatus*

larger grain borer

## Bruchidae

*Acanthoscelides argillaceus*

bean weevil

*Acanthoscelides obvelatus*

bruchid beetle

*Bruchidius atrolineatus*

seed beetle

*Bruchidius incarnatus*

seed beetle

*Bruchus pisorum*

pea weevil

*Callosobruchus analis*

cowpea weevil

*Callosobruchus maculatus*

cowpea weevil

*Callosobruchus phaseoli*

cowpea weevil

*Zabrotes subfasciatus*

mexican bean weevil

## Lepidoptera

## Pyralidae

*Etiella grisea*

pod borer

*Etiella grisea drososcia*

pod borer

*Etiella zinckenella*

limabean pod borer

## Tortricidae

*Cydia fabivora*

pod moth

*Matsumuraeses phaseoli*

adzuki pod worm

## Fungus

## Ascomycota

## Dothideales

## Elsinoaceae

*Elsinoe phaseoli*

scab

## Pleosporaceae

*Cochliobolus miyabeanus* (anamorph*Bipolaris oryzae*)

mitosporic fungi (Coelomycetes)

## Sphaeropsidales

## Sphaerioidaceae

*Phoma exigua* var. *diversispora*

ascochyta leaf spot

## Bacterium

## Corynebacteriaceae

*Curtobacterium flaccumfaciens* pv.*flaccumfaciens*

bacterium wilt

## Virus

*Artichoke yellow ringspot virus**Bean common mosaic virus* [blackeye*cowpea mosaic strain*]

*Broad bean mottle virus*  
*Cowpea severe mosaic virus*  
*Pea early-browning virus*  
*Peanut mottle virus*  
*Peanut stunt virus*  
*Southern bean mosaic virus*

## 2.61 *Phoenix*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Phoenix*.”

**Approved countries:** All countries except Guam, the Philippines and the Solomon Islands

**Quarantine pests:** *Coconut cadang-cadang viroid*, *Fusarium oxysporum* f. sp. *canariensis*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatments:** Not required

**Phytosanitary certificate:** Required

### 2.61.1 Phytosanitary certificate - Additional declarations

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Phoenix* seeds have been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands”.
- (2) If the consignment contains *Phoenix canariensis*, *Phoenix dactylifera* or *Phoenix reclinata* seeds:
  - a) “The *Phoenix* seeds have been produced in a ‘pest free area’ free from *Fusarium oxysporum* f. sp. *canariensis*”.

## 2.62 *Pinus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Pinus*.”

**Approved countries:** All

**Quarantine pests:** Refer to “Pest List for *Pinus*.”

**Import permit:** Required only for seeds sourced from areas not known to be free from *Fusarium circinatum*.

**PEQ:** Level 3B - Required only for seeds sourced from areas not known to be free from *Fusarium circinatum*.

**Phytosanitary certificate:** Required

### 2.62.1 Approved Treatments

- (1) All *Pinus* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.62.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Pinus* seeds have been:
  - i) officially inspected during the growing season according to appropriate procedures and no *Dioryctria abietivorella* or *Conophthorus coniperda* was detected.

**OR**

- ii) inspected for evidence of the presence of insect pests and none was found”.

**AND**

- b) “The *Pinus* seeds have been treated with one of the fungicides in MPI approved treatments”.

**AND**

- c) **For seeds sourced from areas approved by MPI as being free of *Fusarium circinatum* ONLY:**

- i) “The *Pinus* seeds have been sourced from pest free areas that are, as verified by pest surveillance methods, free from *Fusarium circinatum* (syn. *Fusarium subglutinans* f sp. *pini*)”.

**OR**

**For seeds sourced from areas not recognized by MPI as being free from *Fusarium circinatum*:**

- ii) **Import Permit:** Required  
**PEQ:** Level 3B  
**Minimum Period:** To be determined at the time of permit issuance.

**Guidance**

- A list of MPI approved pest free areas is provided using this link: [Fusarium circinatum](#)

**2.62.3 Testing requirements**

- (1) MPI will determine, via the requirements on a permit to import, the testing required for *Pinus* spp. seeds for sowing for quarantine pests. The quarantine period will vary depending on the pests that may be associated with the commodity and the tests required.

**Pest List for *Pinus***

## REGULATED PESTS (actionable)

## Insect

## Insecta

## Coleoptera

## Anobiidae

*Ernobius punctulatus* borer*Cerambycidae**Xylotrechus schaefferi* longhorn beetle

## Curculionidae

*Conotrachelus neomexicanus* cone borer, curculio

## Scolytidae

*Conophthorus coniperda* white pine cone beetle*Conophthorus ponderosae* lodgepole cone beetle*Conophthorus resinosae* red pine cone beetle

## Diptera

## Cecidomyiidae

*Cecidomyia bisetosa* gall midge*Resseliella silvana* gall midge

## Heteroptera

## Coreidae

*Lepispilus sulcicollis* seed eater*Leptoglossus corculus* leaffooted pine seed bug*Leptoglossus occidentalis* coreid bug

## Scutelleridae

*Tetyra bipuctata* shield backed pine seed bug

## Hymenoptera

## Torymidae

*Megastigmus albifrons* seed chalcid

## Lepidoptera

## Pyralidae

*Dioryctria abietivorella* fir coneworm, pine knothorn moth*Dioryctria amatella* southern pine coneworm*Dioryctria auranticella* pyralid moth*Dioryctria clarioralis* coneworm*Dioryctria disclusa* webbing coneworm*Dioryctria merkei* loblolly pine coneworm*Dioryctria rossi* cone borer, pyralid moth

## Tortricidae

*Commophila fuscodorsana* tortricid moth*Cydia anaranjada* slash pine seedworm*Cydia ingens* logleaf pine seed worm*Cydia miscitata* cone borer, tortricid moth*Cydia piperana* cone borer, ponderosa pine seed moth

	<i>Cydia toreuta</i>	cone borer, eastern pine seedworm
Fungus		
Ascomycota		
Diaporthales		
Melanconidaceae		
	<i>Melanconis stilbostoma</i>	mould
	(anamorph <i>Melanconium bicolor</i> )	
Dothideales		
Dothioraceae		
	<i>Sydowia polyspora</i>	pine leaf blight, tip dieback
	(anamorph <i>Sclerophoma pythiophila</i> )	
Mycosphaerellaceae		
	<i>Mycosphaerella dearnessii</i>	brown needle spot
	(anamorph <i>Lecanosticta acicola</i> )	
Pleosporaceae		
	<i>Setosphaeria rostrata</i>	leaf blight, black mould
	(anamorph <i>Exserohilum rostratum</i> )	
Hypocreales		
Hypocreaceae		
	<i>Nectria inventa</i> (anamorph <i>Verticillium tenerum</i> )	verticillium rot
Pezizales		
Otideaceae		
	<i>Caloscypha fulgens</i>	cold fungus
	(anamorph <i>Geniculodendron pyriforme</i> )	
Pyronemataceae		
	<i>Pyronema omphalodes</i>	mould
Mitosporic fungi		
	<i>Coniosporium aterrimum</i>	mould
	<i>Lacellina graminicola</i>	mould
Mitosporic fungi (Coelomycetes)		
Sphaeropsidales		
Sphaerioidaceae		
	<i>Botryodiplodia acicola</i>	mould
	<i>Coniothyrium quercinum</i>	mould
Unknown (Coelomycetes)		
	<i>Melanconium apiocarpon</i>	mould
	<i>Pestalotia breviseta</i>	mould
	<i>Pestalotia foedans</i>	mould
	<i>Pestalotiopsis glandicola</i>	mould
	<i>Sirococcus conigenus</i>	shoot blight
Mitosporic Fungi (Hyphomycetes)		

Hyphomycetales		
Hyphomycetales		
	<i>Cladosporium cucumerinum</i>	black mould
	<i>Cladosporium naumovi</i>	black mould
	<i>Curvularia inaequalis</i>	black mould
	<i>Stemphylium piriforme</i>	leaf mould
Moniliaceae		
	<i>Acremonium subverticillatum</i>	mould
	<i>Aspergillus funiculosus</i>	mould
	<i>Penicillium arenarium</i>	penicillium mould rot
	<i>Penicillium aurantiogriseum</i>	penicillium mould rot
	<i>Penicillium brevicompactum</i>	penicillium mould rot
	<i>Penicillium canadense</i>	penicillium mould rot
	<i>Penicillium chrysogenum</i>	penicillium mould rot
	<i>Penicillium divergens</i>	penicillium mould rot
	<i>Penicillium fuscum</i>	penicillium mould rot
	<i>Penicillium gladioili</i>	penicillium mould rot
	<i>Penicillium oxalicum</i>	penicillium mould rot
	<i>Penicillium viridicatum</i>	penicillium mould rot
	<i>Torula convoluta</i>	mould
	<i>Verticillium albo-atrum</i> [severe strain]	mould
Tuberculariales		
Tuberculariaceae		
	<i>Fusarium arthrosporoides</i>	dry rot
	<i>Fusarium chlamydosporum</i>	root and stem rot
	<i>Fusarium circinatum</i> (syn. <i>Fusarium subglutinans</i> f. sp. <i>pini</i> )	pine pitch canker
	<i>Fusarium moniliforme</i> var. <i>intermedium</i>	mould
	<i>Fusarium polyphialidicum</i>	fusarium mould
Unknown (Hyphomycetes)		
	<i>Oidium verticilloides</i>	mould
Oomycota		
Pythiales		
Pythiaceae		
	<i>Pythium aphanidermatum</i>	root and seed rot
Zygomycota: Zygomycetes		
Mucorales		
Mucoraceae		
	<i>Mucor hiemalis</i>	mucor fruit rot
	<i>Mucor mucedo</i>	mucor fruit rot
	<i>Mucor plumbeus</i>	mould

	<i>Mucor racemosus</i>	storage rot
	<i>Mucor ramanianus</i>	mould
Synccephalastraceae		
	<i>Synccephalastrum racemosum</i>	mould

## 2.63 *Pisum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Pisum*.”

**Approved countries:** Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, Taiwan, United Kingdom and United States of America.

**Quarantine pests:** Refer to “Pest List for *Pisum*”.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.63.1 Approved Fumigation treatment

- (1) All lots of *Pisum* seed imported into New Zealand are required to be fumigated according to the specifications listed in [MPI-STD-ABTRT Approved Biosecurity Treatment](#).
- (2) The treatment is required to be completed offshore prior to export, or on arrival in New Zealand by an MPI approved treatment provider.
- (3) Pre-export treatment for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, where the fumigant used and application rate must be clearly stated, or if done on arrival in New Zealand, must be completed at an MPI-approved facility.

### 2.63.2 Approved Fungicide Treatments

- (1) In lieu of pest free area for *Cladosporium cladosporioides f. sp. pisicola* all pisum seed must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.63.3 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

a) “The *Pisum* seeds have been:

- i) sourced from a ‘pest free area’ free from *Broad bean mottle virus*, *Broad bean stain virus*, *Pea early-browning virus*, *Pea enation mosaic virus*, *Peanut mottle virus*, *Peanut stunt virus*.

**OR**

- ii) sourced from a ‘pest free place of production’ free from *Broad bean mottle virus*, *Broad bean stain virus*, *Pea early-browning virus*, *Pea enation mosaic virus*, *Peanut mottle virus*, *Peanut stunt virus*”;

**AND**

b) “The *Pisum* seeds have been:

- i) sourced from a ‘pest free area’ free from *Cladosporium cladosporioides f. sp. Pisiicola*”;

**OR**

- ii) treated with one of the fungicide combinations in MPI approved treatments”.

**Guidance**

- MPI may verify treatment certification provided from both offshore and onshore treatments through an audit sampling regime, as per **ISPM 20. Guidelines for a phytosanitary import regulatory system.**
- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**Pest List for *Pisum***

## REGULATED PESTS (actionable)

## Insect

## Insecta

## Coleoptera

## Bruchidae

<i>Acanthoscelides zeteki</i>	bruchid beetle
<i>Bruchidius atrolineatus</i>	seed beetle
<i>Bruchidius incarnatus</i>	seed beetle
<i>Bruchidius quinqueguttatus</i>	bruchid beetle
<i>Bruchus affinis</i>	bruchid beetle
<i>Bruchus emarginatus</i>	Mediterranean pulse beetle
<i>Bruchus ervi</i>	bruchid beetle
<i>Bruchus lentis</i>	bruchid beetle
<i>Bruchus pisorum</i>	pea weevil
<i>Bruchus rufimanus</i>	broad bean weevil
<i>Bruchus tristis</i>	bruchid beetle
<i>Callosobruchus analis</i>	cowpea weevil
<i>Callosobruchus chinensis</i>	oriental cowpea weevil
<i>Callosobruchus maculatus</i>	cowpea weevil

## Dermestidae

<i>Trogoderma granarium</i>	khapra beetle
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## Lepidoptera

## Lycaenidae

<i>Euchrysops cnejus</i>	blue butterfly
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## Noctuidae

<i>Spodoptera praefica</i>	western yellowstriped armyworm
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## Pyralidae

<i>Etiella zinckenella</i>	limabean pod borer
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## Tortricidae

<i>Cydia nigricana</i>	pea moth
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## Mitosporic fungi (Hyphomycetes)

## Hyphomycetales

## Dematiaceae

<i>Cladosporium cladosporioides f. sp. pisicola</i>	cladosporium blight
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## Virus

<i>Broad bean mottle virus</i>
<i>Broad bean stain virus</i>
<i>Pea early-browning virus</i>
<i>Pea enation mosaic virus</i>
<i>Peanut mottle virus</i>
<i>Peanut stunt virus</i>

## 2.64 *Populus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Populus*.”

**Approved countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and United States of America

**Quarantine pests:** *Marssonina* spp.

**Import permit:** Required

**PEQ:** Level 2 and Level 1

**Minimum PEQ period:** 2 growing seasons as follows:

- a) in a Level 2 quarantine facility for the first season;
- b) in a Level 1 quarantine facility subsequently.

**Isolation:** 50m exclusion area when planted outside.

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.64.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard

## 2.65 *Prunus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Prunus*.”

**Approved countries:** All

**Quarantine pests:** *Eurytoma amygdali*, *Cherry leaf roll virus* [strains not in New Zealand], *Cherry rasp leaf virus*, *Prune dwarf virus* [strains not in New Zealand], *Prunus necrotic ringspot virus* [strains not in New Zealand], *Plum pox virus*, *Tomato bushy stunt virus*, *Cucumber green mottle mosaic virus* (CGMMV)

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 6 months

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.65.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Prunus* seeds have been inspected in accordance with appropriate official procedures and found to be free of *Eurytoma amygdali*.”

### 2.65.2 Inspection and testing requirements

Organism	MPI acceptable detection methods
<i>Monilinia fructigena</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Cherry leaf roll virus</i> *	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Cs.
<i>Cherry rasp leaf virus</i>	ELISA or PCR using the method of James et al. (1991) AND herbaceous indicators Cq, Cs.
<i>Plum pox virus</i>	Durviz ELISA (Agdia) or PCR using the method of Wetzel et al. (1991) AND herbaceous indicators Nc and Cf.
<i>Prunus necrotic ringspot virus</i> *	ELISA (Agdia) or PCR using the method of Spiegel et al. (1996) AND herbaceous indicators Cs.
<i>Tomato bushy stunt virus</i> *	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.
<i>Cucumber green mottle mosaic virus</i>	ELISA or PCR

Indicator hosts: *Chenopodium foetidum* (Cf), *Chenopodium quinoa* (Cq), *Cucumis sativus* (Cs) and *Nicotiana clevelandii* (Nc).

- (1) For bioassay and ELISA, plants shall be sampled from at least two positions on every stem including a young, fully expanded leaflet at the top of each stem and an older leaflet from a midway position.
- (2) Indicator plants must be grown under appropriate temperatures.
- (3) Indicator plants must be shaded for 12-24 hrs prior to inoculation.

- (4) Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks.
- (5) Inspect plants at least once per week for signs of pest and disease.
- (6) Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection.
- (7) At least two plants of each indicator species unless otherwise stated must be used in mechanical inoculation tests.
- (8) Positive and negative controls must be used in ELISA tests.
- (9) Testing must be carried out on plants while they are in active growth.
- (10) Positive and negative controls (including a blank water control) must be used in PCR.
- (11) For ELISA tests, the unit for testing is an individual seedling because of the presence of pollen transmitted viruses for which pre-determined testing is required (denoted by '\*' in the table above).
- (12) ELISA or PCR for PPV must test negative before herbaceous indicator tests are conducted.

**Guidance:**

- Positive internal controls and a negative plant control should be used.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

**References:**

- James D, Howell WE, Mink GI, 2001. Molecular evidence of the relationship between a virus associated with flat apple disease and Cherry rasp leaf virus as determined by RT-PCR. *Plant Disease* 85, 47-52.
- Spiegel S, Scott SW, BowmanVance V, Tam Y, Galiakparov NN, Rosner A, 1996. Improved detection of prunus necrotic ringspot virus by the polymerase chain reaction. *European Journal of Plant Pathology* 102, 681-685.
- Wetzel T, Candresse T, Ravelonandro M, Dunez J, 1991. A polymerase chain-reaction assay adapted to plum pox potyvirus detection. *Journal of Virological Methods* 33, 355-365.

## 2.66 *Pseudotsuga menziesii*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Pseudotsuga menziesii*.”

**Approved countries:** All

**Quarantine pests:** Refer to “Pest List for *Pseudotsuga menziesii*”.

**Import permit:** Required only for seeds sourced from areas not known to be free from *Fusarium circinatum*

**PEQ:** Level 3B - Required only for seeds sourced from areas not known to be free from *Fusarium circinatum*

**Phytosanitary certificate:** Required

### 2.66.1 Approved treatment

- (1) All *Pseudotsuga menziesii* seeds must be treated as per [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#).

### 2.66.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Pseudotsuga menziesii* seeds have been:
- i) collected from trees that have been officially inspected during the growing season according to appropriate procedures and no *Dioryctria abietivorella* was detected.

**OR**

- ii) inspected for evidence of the presence of insect pests and none was found”.

**AND**

- b) “The *Pseudotsuga menziesii* seeds have been treated for regulated pests”.

**AND**

- c) **For seeds sourced from areas approved by MPI as being free of *Fusarium circinatum* ONLY:**

- i) The *Pseudotsuga menziesii* seeds for sowing have been sourced from pest free areas that are, as verified by pest surveillance methods, free from *Fusarium circinatum* (syn. *Fusarium subglutinans* f sp. *pini*).

**OR**

**For seeds sourced from areas not recognized by MPI as being free from *Fusarium circinatum*:**

- ii) **Import Permit:** Required  
**PEQ:** Level 3B  
**Minimum PEQ period:** To be determined at the time of permit issuance.

**Guidance**

- A list of MPI approved pest free areas is provided using this link: [Fusarium circinatum](#).
- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**2.66.3 Testing requirements**

- (1) MPI will determine, via the requirements on a permit to import, the testing required for *Pseudotsuga menziesii* seeds for sowing for quarantine pests. The quarantine period will vary depending on the pests that may be associated with the commodity and the tests required.

**Pest List for *Pseudotsuga menziesii***

## REGULATED PESTS (actionable)

## Insect

## Insecta

## Coleoptera

## Anobiidae

*Ernobius punctulatus*

borer

## Curculionidae

*Leposoma lecontei*

weevil

## Scarabaeidae

*Melolontha melolontha*

cockchafer

## Diptera

## Cecidomyiidae

*Asynapta keeni*

gall midge

*Contarinia constricta*

gallmidge

*Contarinia cuniculator*

gall midge

*Contarinia oregonensis*

douglas fir cone gall midge

*Contarinia pseudotsugae*

gall midge

*Contarinia washingtonensis*

gall midge

## Lonchaeidae

*Earomyia aquilonia*

fir seed maggot

*Earomyia barbara*

fir seed maggot

## Hemiptera

## Coreidae

*Leptoglossus occidentalis*

coreid bug

## Lepidoptera

## Blastobasidae

*Holcocera augusti*

blastobasid moth

## Geometridae

*Eupithecia albicapitata*

looper

*Eupithecia spermaphaga*

looper

## Pyralidae

*Dioryctria abietivorella*

fir coneworm

## Tortricidae

*Barbara colfaxiana*

douglas fir cone moth

*Chionodes periculella*

gelechiid moth

*Commophila fuscodorsana*

tortricid moth

*Endopiza piceana*

tortricid moth

*Laspeyresia bracteata*

leafroller

*Zeiraphera diniana*

douglas fir cone moth

## Fungus

## Ascomycota

## Pezizales

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	Otideaaceae	
	<i>Caloscypha fulgens</i>	cold fungus
Mitosporic Fungi (Hyphomycetes)		
Hyphomycetales		
Moniliaaceae		
	<i>Penicillium chrysogenum</i>	penicillium mould rot
Tuberculariales		
Tuberculariaceae		
	<i>Fusarium circinatum</i> (syn. <i>Fusarium subglutinans</i> f. sp. <i>pini</i> )	pine pitch canker

## 2.67 *Psophocarpus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Psophocarpus*.”

**Approved countries:** All

**Quarantine pests:** *Etiella* spp., *Maruca testulali*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

**For Seed in pods ONLY:**

### 2.67.1 Phytosanitary certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Psophocarpus* pods have been inspected before export and no caterpillars of *Etiella* spp. or *Maruca testulalis* were found in a 600 unit sample”.

## 2.68 *Pyrus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Pyrus*.”

**Approved countries:** All

**Quarantine pests:** *Apple scar skin viroid*, *Monilinia fructigena*, *Tomato bushy stunt virus*, Pear bark measle

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 6 months

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.68.1 Phytosanitary requirements

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must provide the certifying statement as per Part 1.5.2 of this import health standard.

### 2.68.2 Inspection and testing requirements

Organism	MPI acceptable detection methods
<i>Monilinia fructigena</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Apple scar skin viroid</i>	PCR using the method of Hadidi et al. (1990).
<i>Tomato bushy stunt virus</i> *	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.
<i>Pear bark measle</i>	Growing season inspection in PEQ for disease expression.

Indicator hosts: *Chenopodium quinoa* (Cq) and *Nicotiana clevelandi* (Nc).

- (1) For bioassay and ELISA, plants shall be sampled from at least two positions on every stem including a young, fully expanded leaflet at the top of each stem and an older leaflet from a midway position.
- (2) Indicator plants must be grown under appropriate temperatures.
- (3) Indicator plants must be shaded for 12-24 hrs prior to inoculation.
- (4) Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks.
- (5) Inspect plants at least once per week for signs of pest and disease.
- (6) Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection.
- (7) PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.
- (8) At least two plants of each indicator species unless otherwise stated must be used in mechanical inoculation tests.
- (9) Positive and negative controls must be used in ELISA tests.
- (10) Testing must be carried out on plants while they are in active growth.
- (11) Positive and negative controls (including a blank water control) must be used in PCR.

- (12) For ELISA tests, the unit for testing is an individual seedling because of the presence of pollen transmitted viruses for which pre-determined testing is required (denoted by '\*' in the table above).

**Guidance**

- Positive internal controls and a negative plant control should be used.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

**References:**

- Hadidi A, Yang X, 1990. Detection of pome fruit viroids by enzymatic cDNA amplification. *Journal of Virological Methods* 30, 261-269.

## 2.69 *Quercus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Quercus*.”

**Approved countries:** Australia, Canada, Germany, India, Israel, Japan, Mexico, Spain, Tunisia, United Kingdom and United States of America

**Quarantine pests:** *Ceratocystis fagacearum*, *Cryphonectria parasitica*, Curculionidae

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 2 years

**Isolation:** 50m exclusion area when planted outside

**Phytosanitary certificate:** Required

### 2.69.1 Approved treatments

- (1) All *Quercus* seeds must be fumigated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.69.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Quercus* seeds have been:
  - i) collected from trees that have been officially inspected during active growth and no diseases caused by *Ceratocystis fagacearum* or *Cryphonectria parasitica* were detected;

**OR**

- ii) sourced from an area where *Ceratocystis fagacearum* and *Cryphonectria parasitica* are not known to occur”.

**AND**

- b) “The *Quercus* seeds have been fumigated with methyl bromide at \_\_\_ pressure for \_\_\_ hours at \_\_\_ g/m<sup>3</sup> at a temperature of \_\_\_ °C”;

### 2.69.3 Inspection and testing requirements

Organism	MPI acceptable detection methods
<i>Ceratocystis fagacearum</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Cryphonectria parasitica</i>	Growing season inspection in PEQ for disease symptom expression.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.70 *Ribes*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “See 155.02.05 under *Ribes*.”

**Approved countries:** All

**Quarantine pests:** Refer to pest list for *Ribes*

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 6 months

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.70.1 Phytosanitary requirements

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.70.2 Inspection and testing requirements

Organism	MPI acceptable detection methods
For both “Currant type” and “Gooseberry types” <i>Ribes</i>	
<i>Raspberry ringspot virus</i> *	ELISA or PCR <b>AND</b> herbaceous indexing with Ca and Cq <b>OR</b> Cq, Cs and Nc
For “Currant type” <i>Ribes</i> only	
<i>Tobacco rattle virus</i> [strains not in New Zealand]	Herbaceous indexing with Ca and Cq <b>OR</b> Cq, Cs and Nc.

Indicators: *Chenopodium amaranticolor*, Ca - *Chenopodium quinoa*, Cq – *Cucumis sativus*, Cs – *Nicotiana glauca*, Nc.

- (1) Tests are to be carried out on plants germinated from the imported seeds.
- (2) Testing must be carried out on plants while they are in active growth.
- (3) Indicator plants must be grown under appropriate temperatures.
- (4) Indicator plants must be shaded for 12-24 hrs prior to inoculation.
- (5) For each *Ribes* plant, at least two fully-expanded leaves must be sampled from different branches of the main stem, one a younger leaf and one an older leaf.
- (6) Post-inoculated indicator plants must be maintained under appropriate glasshouse conditions for at least 4 weeks.
- (7) Post-inoculated indicator plants must be inspected at least twice per week for signs of virus infection with observations being recorded on a weekly basis.

- (8) For ELISA tests, the unit for testing is an individual seedling because of the presence of pollen transmitted viruses for which pre-determined testing is required (denoted by '\*' in the table above).
- (9) PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing;
- (10) Positive, negative, and buffer controls must be used in ELISA tests.
- (11) Positive controls must be used in PCR.
- (12) Inspection of the *Ribes* plants by the operator of the PEQ facility for signs of pest and disease must be at least once per week.

**Guidance**

- Positive internal controls and a negative plant control should be used.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

**Ribes REGULATED PESTS (actionable)**

Virus

*Raspberry ringspot virus*

*Tobacco rattle virus (strains not in  
New Zealand)*

\*For organisms intercepted that are not listed within this pest list refer to Biosecurity Organisms Register for Imported Commodities (BORIC) to determine the regulatory status.

## 2.71 *Rubus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Rubus*”.

**Approved countries:** All

**Quarantine pests:** Refer to pest list for *Rubus*

**Import permit:** Required

**PEQ:** Level 2

**Minimum PEQ period:** 3 months

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.71.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.71.2 Inspection and testing requirements

Organism	MPI acceptable detection methods
<i>Raspberry ringspot virus</i>	ELISA or PCR and herbaceous indexing with Cq, Cs and Nc
<i>Tomato ringspot virus</i>	ELISA or PCR and herbaceous indexing with Cq, Cs and Nc

Indicators: Chenopodium quinoa, Cq – Cucumis sativus, Cs – Nicotiana clevelandii, Nc.

- (1) Tests are to be carried out on plants germinated from the imported seeds.
- (2) The quarantine period will begin once the plants have entered a period of active growth and have two fully expanded leaves.
- (3) Virus testing needs to be conducted on new spring growth. For each *Rubus* plant, at least two young fully-expanded leaves must be sampled from different branches of the main stem, one a younger leaf and one older leaf.
- (4) Herbaceous Indicator plants must be grown under appropriate temperatures at 18-25 °C.
- (5) Indicator plants must be shaded for 24 hrs prior to inoculation.
- (6) For each *Rubus* plant, at least two fully-expanded leaves must be sampled from different branches of the main stem, one a younger leaf and one an older leaf.
- (7) Post-inoculated indicator plants must be maintained under appropriate glasshouse conditions for at least 4 weeks.
- (8) Post-inoculated indicator plants must be inspected at least twice per week for signs of virus infection with observations being recorded on a weekly basis.
- (9) Positive and negative (buffer solution) controls must be used on all herbaceous indexing tests.
- (10) PCR and ELISA tests need to be validated using positive controls/reference material prior to use in quarantine testing;
- (11) Positive, negative, and buffer controls must be used in ELISA tests.

- (12) Positive and negative controls must be used in PCR.
- (13) Inspection of the *Rubus* plants by the operator of the PEQ facility for signs of pest and disease must be at least twice per week during periods of active growth.

**Guidance**

- Positive internal controls and a negative plant control should be used.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

**Rubus REGULATED PESTS (actionable)**

Virus

*Raspberry ringspot virus*

*Tomato ringspot virus*

\*For organisms intercepted that are not listed within this pest list refer to Biosecurity Organisms Register for Imported Commodities (BORIC) to determine the regulatory status.

## 2.72 *Sesamum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Sesamum*.”

**Approved countries:** All

**Quarantine pests:** *Alternaria sesami*, *Cercoseptoria sesami*, *Xanthomonas campestris* pv. *sesami*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.72.1 Approved treatment

- (1) All *Sesamum* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.72.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Sesamum* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Alternaria sesami*, *Cercoseptoria sesami* and *Xanthomonas campestris* pv. *sesami*;

**OR**

    - ii) sourced from a ‘pest free place of production’ free from *Alternaria sesami*, *Cercoseptoria sesami* or *Xanthomonas campestris* pv. *sesami*”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.73 *Solanum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Solanum*.” For *Solanum lycopersicum* and *Solanum tuberosum*, please refer to the individual schedules which follow.

**Approved countries:** All

**Quarantine pests:** *Potato spindle tuber viroid*.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.73.1 Phytosanitary certificate - Additional declarations

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The [*insert species name*] seeds for sowing have been:
    - i) sourced from an ‘pest free area’ free from *Potato spindle tuber viroid*;
- OR**
- ii) sourced from a ‘pest free place of production’ free from *Potato spindle tuber viroid*”;
- OR**
- b) “The [*insert species name*] seeds for sowing have been officially tested, on a representative sample and using appropriate methods, and found to be free from *Potato spindle tuber viroid*”.

### 2.73.2 Testing requirements

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

## 2.74 *Solanum lycopersicum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Solanum lycopersicum*.”

**Approved countries:** All

**Quarantine pests:** *Pepino mosaic virus*, *Potato spindle tuber viroid*, *Tomato chlorotic dwarf viroid*, *Tomato brown rugose fruit virus*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.74.1 Phytosanitary certificate - Additional declarations

(1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:

- a) “The *Solanum lycopersicum* seeds have been prepared to industry standards with thorough cleaning to remove all traces of flesh from the seeds”.

**AND**

- b) “The *Solanum lycopersicum* seeds have been:
  - i) sourced from a ‘pest free area’ free from *Pepino mosaic virus*.

**OR**

- ii) sourced from a ‘pest free place of production’ free from *Pepino mosaic virus*.

**OR**

- iii) officially tested, on a representative sample, and using appropriate methods, and found to be free from *Pepino mosaic virus*”.

**AND**

- c) “The *Solanum lycopersicum* seeds have been:
  - i) sourced from a ‘pest free area’ free from *Potato spindle tuber viroid*.

**OR**

- ii) sourced from a ‘pest free place of production’ free from *Potato spindle tuber viroid*.

**OR**

- iii) officially tested, on a representative sample, and using appropriate methods, and found to be free from *Potato spindle tuber viroid*”.

**AND**

- d) “ The *Solanum lycopersicum* seeds have been:
  - i) sourced from a ‘pest free area’ free from *Tomato chlorotic dwarf viroid*.

**OR**

- ii) sourced from a 'pest free place of production' free from *Tomato chlorotic dwarf viroid*.

**OR**

- iii) officially tested, on a representative sample, and using appropriate methods, and found to be free from *Tomato chlorotic dwarf viroid*".

**AND**

- e) " The *Solanum lycopersicum* seeds have been:

- i) sourced from a 'pest free area', free from *Tomato brown rugose fruit virus*

**OR**

- ii) sourced from a 'pest free place of production' free from *Tomato brown rugose fruit virus*".

**OR**

- iii) officially tested, on a representative sample of a minimum of 3000 seeds officially drawn according to the ISTA or AOSA sampling methodology, using an NPPO-approved ELISA or NPPO-approved PCR testing method and found free from *Tomato brown rugose fruit virus*".

### 2.74.2 Testing requirements

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.
- (3) Testing on-shore will be performed using an MPI-approved testing method.

#### Guidance

- The ISHI-Veg local lesion bioassay for *Tomato brown rugose fruit virus* is not accepted as a valid test by MPI.
- Additional declarations on phytosanitary certificates to meet the offshore testing requirements for *Tomato brown rugose fruit virus* in Import Health Standard 155.02.05: *Seeds for sowing* should be based only on a negative result obtained in an NPPO-approved ELISA or NPPO-approved PCR test and not on results from a bioassay.

## 2.75 *Solanum tuberosum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Solanum tuberosum*.”

**Approved countries:** All

**Quarantine pests:** *Andean potato latent virus*, *Andean potato mild mosaic virus*, *Potato black ring virus*, *Potato spindle tuber viroid*, *Potato virus T*, *Tobacco ringspot virus*

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 1 growing season

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.75.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

## 2.76 Sorghum

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Sorghum*.”

**Approved countries:** Australia, USA

**Quarantine pests:** *Peronosclerospora sorghi*, *Sclerospora graminicola*, *Trogoderma* spp., Ustilaginales

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.76.1 Approved treatments

- (1) All *Sorghum* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.76.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Sorghum* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Peronosclerospora sorghi* and *Sclerospora graminicola*.
  - OR**
  - ii) sourced from a ‘pest free place of production’ free from *Peronosclerospora sorghi* and *Sclerospora graminicola*”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.77 *Stenotaphrum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Stenotaphrum*.”

**Approved countries:** All

**Quarantine pests:** *Panicum mosaic virus*

**Import permit:** Required

**PEQ:** Level 3B

**Minimum PEQ period:** 1 growing season

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.77.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

## 2.78 *Trigonella foenum-graecum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Trigonella foenum-graecum*.”

**Approved countries:** All

**Quarantine pests:** *Cercosporidium traversiana*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.78.1 Approved treatments

- (1) All *Trigonella foenum-graecum* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.78.2 Phytosanitary certificate - Additional declaration

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Trigonella foenum-graecum* seeds have been:
    - i) sourced from a ‘pest free area’ free from *Cercosporidium traversiana*;
  - OR**
  - ii) sourced from a ‘pest free place of production’ free from *Cercosporidium traversiana*.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

## 2.79 *Triticum*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Triticum*.”

**Approved countries:** Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and United States of America.

**Quarantine pests:** Refer to “Pest List for *Triticum*”.

**Import permit:** Not required

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.79.1 Approved treatments

- (1) In lieu of pest free area for *Alternaria triticina*, *Cephalosporium gramineum*, and *Curvularia verruculosa* all *Triticum* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#)

### 2.79.2 Phytosanitary Certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfection and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Triticum* seeds have been:
    - i) sourced from a ‘pest free area’ free from the named regulated bacteria (*Rathayibacter tritici*, *Xanthomonas campestris* pv. *undulosa*) and viruses (*High plains virus*, *Indian peanut clump virus*);

**OR**

  - ii) “sourced from a ‘pest free place of production’ free from the named regulated bacteria (*Rathayibacter tritici*, *Xanthomonas campestris* pv. *undulosa*) and viruses (*High plains virus*, *Indian peanut clump virus*)”.
- AND**
- b) “The *Triticum* seeds have been:
  - i) sourced from a ‘pest free area’ free from *Anguina tritici*”,

**OR**

- ii) “sourced from a ‘pest free place of production’ free from *Anguina tritici*”,

**OR**

- iii) “inspected microscopically for *Anguina tritici* in accordance with appropriate official procedures, and no *Anguina tritici* spores were detected”.

**AND**

- c) “The *Triticum* seeds have been:

- i) sourced from a 'pest free area' free from the named regulated fungi (*Alternaria triticina*, *Cephalosporium gramineum*, *Curvularia verruculosa*);

**OR**

- ii) "treated with one of the fungicide combinations in MPI approved treatments";

**AND**

- d) "The *Triticum* seeds have been:

- i) sourced from a 'pest free area' free from *Tilletia controversa* and *Tilletia indica*";

**OR**

- ii) "sourced from a 'pest free place of production' free from *Tilletia controversa* and *Tilletia indica* and treated with an approved fungicide treatment";

**OR**

- iii) "a representative sample of 600 seeds, drawn from this consignment according to the International Seed Testing Associations methodology, has been tested for *Tilletia controversa* and *Tilletia indica* (and no spores of *Tilletia controversa* or *Tilletia indica* were found in a representative sample of 600 seeds drawn from this consignment) AND treated with an approved fungicide treatment".

### 2.79.3 Testing requirements

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**Triticum REGULATED PESTS (actionable)**

## Insect

## Insecta

## Blattodea

## Blattidae

<i>Blatta orientalis</i>	oriental cockroach
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## Coleoptera

## Bostrichidae

<i>Dinoderus distinctus</i>	bostrichid beetle
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<i>Prostephanus truncatus</i>	larger grain borer
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## Bruchidae

<i>Callosobruchus chinensis</i>	oriental cowpea weevil
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## Curculionidae

<i>Caulophilus oryzae</i>	broadnosed grain weevil
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## Dermestidae

<i>Trogoderma glabrum</i>	khapra beetle
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<i>Trogoderma granarium</i>	khapra beetle
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<i>Trogoderma grassmani</i>	trogoderma beetle
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<i>Trogoderma inclusum</i>	trogoderma beetle
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<i>Trogoderma ornatum</i>	trogoderma beetle
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<i>Trogoderma simplex</i>	dermestid beetle
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<i>Trogoderma sternale</i>	dermestid beetle
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<i>Trogoderma variabile</i>	warehouse beetle
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## Languriidae

<i>Pharaxonotha kirschii</i>	Mexican grain beetle
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## Tenebrionidae

<i>Cynaesus angustus</i>	larger black flour beetle
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<i>Latheticus oryzae</i>	longheaded flour beetle
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<i>Palorus ratzeburgi</i>	smalleyed flour beetle
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<i>Palorus subdepressus</i>	depressed flour beetle
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<i>Tribolium audax</i>	american black flour beetle
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<i>Tribolium freemani</i>	flour beetle
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<i>Ulomoides dermestoides</i>	darkling beetle
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## Diptera

## Cecidomyiidae

<i>Contarinia pisi</i>	pea midge
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## Lepidoptera

## Noctuidae

<i>Faronta albilinea</i>	wheat head armyworm
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## Pyralidae

<i>Corcyra cephalonica</i>	rice moth
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<i>Paralipsa gularis</i>	stored nut moth
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## Tineidae

<i>Cephitinea colonella</i>	grain moth
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<i>Haplotinea insectella</i>	casemaking moth
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	Psocoptera	
	Liposcelidae	
	<i>Troctes minutus</i>	psocid
Mite		
	Arachnida	
	Acarina	
	Acaridae	
	<i>Caloglyphus krameri</i>	
	<i>Michaelopus macfarlanei</i>	
	Eriophyidae	
	<i>Aceria tulipae (vector)</i>	wheat curl mite
	<i>Aceria tosichella</i>	wheat curl mite
	Tarsonemidae	
	<i>Tarsonemus granarius</i>	
	Tuckerellidae	
	<i>Tuckerella ablutus</i>	
	unknown <i>Acarina</i>	
	<i>Paratriophyteus coineaurius</i>	
Nematode		
	Secernentea	
	Tylenchida	
	Anguinidae	
	<i>Anguina tritici [vector]</i>	seed gall nematode
Fungus		
	Basidiomycota: Ustomycetes	
	Ustilaginales	
	Tilletiaceae	
	<i>Tilletia controversa</i>	dwarf bunt
	<i>Tilletia indica</i>	karnal bunt
Mitosporic fungi (Hyphomycetes)		
	Hyphomycetales	
	Dematiaceae	
	<i>Alternaria triticina</i>	
	<i>Curvularia verruculosa</i>	
	Moniliaceae	
	<i>Cephalosporium gramineum</i>	stripe
	Corynebacteriaceae	
	<i>Rathayibacter tritici</i>	yellow ear rot
	Pseudomonadaceae	
	<i>Xanthomonas campestris pv. undulosa</i>	leaf streak
Virus		
	<i>High plains virus</i>	
	<i>Indian peanut clump virus</i>	

## 2.80 *Ulmus*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Ulmus*.”

**Approved countries:** All

**Quarantine pests:** *Cherry leaf roll virus*, *Elm mottle virus*

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.80.1 Phytosanitary Certificate - Additional declaration

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Ulmus* seeds have been:
    - i) sourced from trees which were officially inspected during the growing season and no *Cherry leaf roll virus* or *Elm mottle virus* was detected;
- OR**
- ii) sourced from an area where *Cherry leaf roll virus* and *Elm mottle virus* are not known to occur”.

## 2.81 *Vaccinium*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Vaccinium*.”

**Approved countries:** All

**Quarantine pests:** Refer to pest list for *Vaccinium*

**Import permit:** Required.

**PEQ:** Level 3B

**Minimum PEQ period:** 6 months

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.81.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.81.2 Inspection and testing requirements

Organism	MPI acceptable detection methods
<i>Diaporthe vaccinii</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Botryosphaeria vaccinii</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Monilinia fructigena</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Monilinia vaccinii-corymbosi</i>	Growing season inspection in PEQ for disease symptom expression.
<i>Blueberry shock virus*</i>	ELISA (Agdia) or PCR AND herbaceous indicators Nb, Nc.
<i>Blueberry leaf mottle virus*</i>	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.
<i>Peach rosette mosaic virus*</i>	ELISA (Agdia) or PCR AND herbaceous indicators Ca, Cq
<i>Tomato ringspot virus*</i>	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.

Indicator hosts: *Chenopodium amaranticolor* (Ca), *C. quinoa* (Cq), *Nicotiana benthamiana* (Na), and *N. clevelandi* (Nc).

- (1) For bioassay and ELISA, plants shall be sampled from at least two positions on every stem including a young, fully expanded leaflet at the top of each stem and an older leaflet from a midway position.
- (2) Indicator plants must be grown under appropriate temperatures.
- (3) Indicator plants must be shaded for 12-24 hrs prior to inoculation.
- (4) Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks.
- (5) Inspect plants at least once per week for signs of pest and disease.
- (6) Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection..
- (7) PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.

- (8) At least two plants of each indicator species unless otherwise stated must be used in mechanical inoculation tests.
- (9) Positive and negative controls must be used in ELISA tests.
- (10) For ELISA tests, the unit for testing is an individual seedling because of the presence of pollen transmitted viruses for which pre-determined testing is required (denoted by '\*' in the table above).
- (11) Testing must be carried out on plants while they are in active growth. Positive and negative controls (including a blank water control) must be used in PCR.

**Guidance**

- Positive internal controls and a negative plant control should be used.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

**Vaccinium REGULATED PESTS (actionable)**

Fungus

Ascomycota

Diaporthales

Valsaceae

<i>Diaporthe vaccinii</i> (anamorph <i>Phomopsis vaccinii</i> )	twig blight
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Dothideales

Botryosphaeriaceae

<i>Botryosphaeria vaccinii</i> (anamorph <i>Phyllosticta elongata</i> )	
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Leotiales

Sclerotiniaceae

<i>Monilinia fructigena</i> (anamorph <i>Monilia fructigena</i> )	european brown rot
<i>Monilinia vaccinii-corymbosi</i>	brown rot

Virus

Bromoviridae

Ilarvirus

*Blueberry shock virus*

Comoviridae

Nepovirus

*Blueberry leaf mottle virus**Peach rosette mosaic virus**Tomato ringspot virus* [strains not in  
New Zealand]

## 2.82 *Vicia*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Vicia*.”

**Approved countries:** Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, United Kingdom and United States of America.

**Quarantine pests:** Refer to pest list for *Vicia*

**Import permit:** Not required.

**PEQ:** Not required

**Phytosanitary certificate:** Required

### 2.82.1 Approved treatments

- (1) All *Vicia* seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.82.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfection and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The *Vicia* seeds have been:
    - i) sourced from a ‘pest free area’ free from the named regulated viruses (*Artichoke yellow ringspot virus*, *Broad bean mottle virus*, *Broad bean stain virus*, *Broad bean true mosaic virus*, *Pea early-browning virus*, *Pea enation mosaic virus*, *Peanut stunt virus*)”.

**OR**

  - ii) “sourced from a ‘pest free place of production’ free from the named regulated viruses (*Artichoke yellow ringspot virus*, *Broad bean mottle virus*, *Broad bean stain virus*, *Broad bean true mosaic virus*, *Pea early-browning virus*, *Pea enation mosaic virus*, *Peanut stunt virus*)”.

#### Guidance

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)

**Vicia REGULATED PESTS (actionable)**

## Insect

## Insecta

## Coleoptera

## Bruchidae

<i>Bruchidius incarnatus</i>	seed beetle
<i>Bruchidius quinqueguttatus</i>	bruchid beetle
<i>Bruchus atomarius</i>	bruchid beetle
<i>Bruchus dentipes</i>	bruchid beetle
<i>Bruchus pisorum</i>	pea weevil
<i>Bruchus rufimanus</i>	broad bean weevil
<i>Callosobruchus chinensis</i>	oriental cowpea weevil
<i>Callosobruchus maculatus</i>	cowpea weevil
<i>Callosobruchus phaseoli</i>	cowpea weevil

## Dermestidae

<i>Trogoderma granarium</i>	khapra beetle
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## Tenebrionidae

<i>Tribolium destructor</i>	dark flour beetle
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## Diptera

## Cecidomyiidae

<i>Contarinia pisi</i>	pea midge
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## Lepidoptera

## Lycaenidae

<i>Virachola livia</i>	pomegranate butterfly
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## Virus

<i>Artichoke yellow ringspot virus</i>
<i>Broad bean mottle virus</i>
<i>Broad bean stain virus</i>
<i>Broad bean true mosaic virus</i>
<i>Pea early-browning virus</i>
<i>Pea enation mosaic virus</i>
<i>Peanut stunt virus</i>

## 2.83 *Vigna*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Vigna*.”

**Approved countries:** All

**Quarantine pests:** *Curtobacterium flaccumfaciens* pv. *flaccumfaciens*, *Xanthomonas campestris* pv. *vignicola*, *Earias vitella*, *Maruca testulalis*, *Trogoderma* spp.

**Import permit:** Not required

**PEQ:** Not required

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.83.1 Phytosanitary certificate - Additional declarations

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
- a) “The *Vigna* seed have been:
    - i) collected from plants which were inspected during the growing season according to appropriate procedures and no *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* or *Xanthomonas campestris* pv. *vignicola* was detected.
- OR**
- ii) sourced from an area where *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* and *Xanthomonas campestris* pv. *vignicola* are not known to occur”.
- AND [For seed in pods]:**
- b) “The *Vigna* seed pods were inspected before export and no caterpillars of *Earias vitella* or *Maruca testulalis* were found in a 600 unit sample”.

## 2.84 *Vitis*

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Vitis*.”

**Approved countries:** All

**Quarantine pests:** *Grapevine angular mosaic virus*, *Grapevine Bulgarian latent virus*, *Grapevine chrome mosaic virus*, *Grapevine fanleaf virus* [strains not in New Zealand], *Grapevine line pattern virus*, *Grapevine yellow speckle viroid-2*, *Peach rosette mosaic virus*, *Tomato ringspot virus*.

**Import permit:** Required

**PEQ:** Level 2

**Minimum PEQ period:** 3 months

**Approved treatment:** Not required

**Phytosanitary certificate:** Required

### 2.84.1 Phytosanitary certificate

- (1) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard.

### 2.84.2 Inspection and testing requirements

Organism	MPI acceptable detection methods
<i>Grapevine angular mosaic virus</i>	Growing season inspection
<i>Grapevine Bulgarian latent virus</i>	Herbaceous indicators (Ca and Cq)
<i>Grapevine chrome mosaic virus</i>	Herbaceous indicators (Ca, Cq, Cs and Nt)
<i>Grapevine fanleaf virus</i> [strains not in New Zealand]	ELISA or PCR AND herbaceous indicators (Ca, Cq and Cs)
<i>Grapevine line pattern virus</i>	Growing season inspection
<i>Grapevine yellow speckle viroid-2</i>	PCR and Growing season inspection
<i>Peach rosette mosaic virus</i> *	ELISA or PCR AND herbaceous indicators (Ca, Cq, Cs and Nt)
<i>Tomato ringspot virus</i> *	ELISA or PCR AND herbaceous indicators (Ca and Cq)

Herbaceous indexing will use the indicators Ca - *Chenopodium amaranticolor*, Cq - *Chenopodium quinoa*, Cs - *Cucumis sativus* and Nt - *Nicotiana tabacum*.

- (1) Tests are to be carried out on plants germinated from the imported seeds.
- (2) The quarantine period will begin once the plants have entered a period of active growth and have two fully expanded leaves.
- (3) Virus testing is to be conducted on new spring growth. For each plant, at least two fully-expanded leaves must be sampled from different branches of the main stem, one a younger leaf and one an older leaf.
- (4) For ELISA tests, the unit for testing is an individual seedling because of the presence of pollen transmitted viruses for which pre-determined testing is required (denoted by ‘\*’ in the table above).

- (5) All PCR and ELISA tests must be validated using positive controls prior to use in quarantine testing. Positive and negative controls (including a blank water control for PCR) must be used in all tests.
- (6) At least two plants of each herbaceous indicator species must be used in each test. Herbaceous indicator plants must be grown under appropriate temperatures and must be shaded for 24 hrs prior to inoculation. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks. Inspect inoculated indicator plants at least twice per week for symptoms of virus infection.
- (7) Inspection of the *Vitis* plants by the operator of the PEQ facility for signs of pest and disease must be at least twice per week while in active growth. A record of inspections carried out by the Operator is to be kept and made available to the MPI Inspector on request.

**Guidance:**

- Positive internal controls and a negative plant control should be used.
- Internal controls in PCR tests are important to avoid the risk of false negatives.

## 2.85 Zea

The following requirements only apply to species in the Plant Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under Zea.”

**Approved countries:** Australia, Austria, Canada, Chile, Finland, France, Germany, Greece, Hungary, Japan, the Netherlands, Norway, South Africa, Sweden, Switzerland, the United Kingdom and United States of America.

**Quarantine pests:** *Acidovorax avenae* subsp. *avenae*, *Clavibacter michiganensis* subsp. *nebraskensis*, *Pantoea stewartii*, *High plains virus*, *Maize dwarf mosaic virus*, *Maize chlorotic mottle virus*, *Sugarcane mosaic virus*, *Botryosphaeria zeae*, *Cochliobolus pallescens*, *Cochliobolus tuberculatus*, *Claviceps gigantea*, *Gloeocercospora sorghi*, *Ustilago maydis*, *Peronosclerospora heteropogoni*, *P. maydis*, *P. philippinensis*, *P. sacchari*, *P. sorghi*, *Phaeocystroma ambiguum*, *Sclerophthora rayssiae* var. *zeae*, *Rhizopus maydis*, *Stenocarpella macrospora* and *Cephalosporium maydis*.

**Regulated pests:** Refer to pest list for Zea

**Import Permit:** Permit not required, unless seeds are to be grown in PEQ.

**PEQ:** Not required, unless imported under options 2.2.2 or 2.2.3 of the MPI [Protocol](#) for Testing for the Presence of Genetically Modified Plant Material.

**Phytosanitary certificate:** Required

### 2.85.1 Approved treatments

- (1) In lieu of pest free area for the regulated fungi specified all Zea seeds must be treated as per [MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments](#).

### 2.85.2 Phytosanitary certificate - Additional declarations

- (1) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfection and/or disinfection treatment section.
- (2) If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the certifying statement as per Part 1.5.2 of this import health standard and also the following additional declaration (s) to the phytosanitary certificate:
  - a) “The Zea seeds have been:
    - i) sourced from a ‘pest free area’ free from the named regulated bacteria *Acidovorax avenae* subsp. *avenae*, *Clavibacter michiganensis* subsp. *nebraskensis*, *Pantoea stewartii* and viruses *High plains virus* and *Maize dwarf mosaic virus*”;

**OR**

  - ii) “sourced from a ‘pest free place of production’ free from the named regulated bacteria *Acidovorax avenae* subsp. *avenae*, *Clavibacter michiganensis* subsp. *nebraskensis*, *Pantoea stewartii* and viruses *High plains virus* and *Maize dwarf mosaic virus*”;

**OR**

- iii) “a representative sample, officially drawn from this consignment according to ISTA or AOSA methodology, has been tested for the presence of and found free from the named regulated bacteria *Acidovorax avenae* subsp. *avenae*, *Clavibacter michiganensis* subsp. *nebraskensis*, *Pantoea stewartii* and viruses *High plains virus* and *Maize dwarf mosaic virus*”.

**AND**

- b) “The *Zea* seeds have been:
- i) sourced from a ‘pest free area’ free from the named regulated viruses *Maize chlorotic mottle virus* and *Sugarcane mosaic virus*”;

**OR**

- ii) “a representative sample, officially drawn from this consignment according to ISTA or AOSA methodology, has been tested for and found free from the named regulated viruses *Maize chlorotic mottle virus* and *Sugarcane mosaic virus*”

**Guidance**

- Refer section 1.11 Seeds of [MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments](#)
- Countries that MPI recognise endorsing “Pest free area” as an additional declaration for *Sugarcane mosaic virus* are as follows:
  - Australia, Austria, Canada, Finland, France, Germany, Greece, Hungary, Japan, the Netherlands, Norway, South Africa, Sweden, Switzerland, the United Kingdom and United States of America

**AND**

- c) “The *Zea* seeds have been:
- i) sourced from a ‘pest free area’ free from the named regulated fungi *Botryosphaeria zeae*, *Cochliobolus pallescens*, *Cochliobolus tuberculatus*, *Claviceps gigantea*, *Gloeocercospora sorghi*, *Ustilago maydis*, *Peronosclerospora heteropogoni*, *Peronosclerospora maydis*, *Peronosclerospora philippinensis*, *Peronosclerospora sacchari*, *Peronosclerospora sorghi*, *Phaeocystostroma ambiguum*, *Sclerophthora rayssiae* var. *zeae*, *Rhizopus maydis*, *Stenocarpella macrospora* and *Cephalosporium maydis*”;

**OR**

- ii) “treated with one of the fungicide combinations in MPI approved treatments”.

**2.85.3 GM seed testing**

- (1) In addition to the phytosanitary requirements above, all consignments of *Zea mays* (sweet corn, maize) are required to be representatively sampled, tested, and found to be free of unapproved GM seed according to the Protocol (refer to Part 1.5.4: *Genetically Modified Testing Certificate*).

**Guidance**

- The MPI Protocol for testing for the presence of genetically modified plant material can be found at <https://www.mpi.govt.nz/document-vault/10250>
- More information on genetically modified seeds can also be found at <https://www.mpi.govt.nz/importing/plants/seeds-for-sowing/genetically-modified-seeds/>
- Popcorn does not require GM testing. The full scientific name must be specified on the phytosanitary certificate (e.g. *Zea mays* var. *everta*) to enable popcorn to be given clearance without a GM testing certificate.

**2.85.4 Testing requirements**

- (1) Testing is required to be completed offshore prior to export, or on arrival in New Zealand.
- (2) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

- (3) ***Pantoea stewartii***: A negative result from testing a representative sample of a minimum of 400 seeds, using the immunosorbent assay test described by Lamka *et al.* (1991), may be used to show the consignment is free of *Pantoea stewartii* subsp. *stewartii*;
- (4) ***Clavibacter michiganensis subsp. nebraskensis***: A negative result from testing a representative sample of a minimum of 400 seeds, using the sCNS Culture Plate Method (Shepherd, 1999; [www.seedhealth.org](http://www.seedhealth.org)), may be used to show the consignment is free of *Clavibacter michiganensis* subsp. *Nebraskensis*;
- (5) ***Acidovorax avenae subsp. avenae***: A negative result from testing a representative sample of a minimum of 400 seeds, using the methodology of Dange *et al.* (1978), may be used to show the consignment is free of *Acidovorax avenae* subsp. *Avenae*;
- (6) ***High plains virus***: A negative result from testing a representative sample of seeds using greenhouse grow-out tests and ELISA testing as described by Forster *et al.* (2001) and Crop Plant Compendium 2003, or a representative sample of a minimum of 3000 seeds, using a PCR NPPO approved method, such as Lebas *et al.* (2005), may be used to show that the consignment is free of *High plains virus*;
- (7) ***Maize dwarf mosaic virus***: A negative result from testing a representative sample of a minimum of 2000 seeds, using an NPPO approved method, may be used to show the consignment is free of *Maize dwarf mosaic virus*;
- (8) ***Maize chlorotic mottle virus***: A negative result from testing a representative sample of a minimum of 3000 seeds, using ELISA or PCR testing, may be used to show the consignment is free from *Maize chlorotic mottle virus*;
- (9) ***Sugarcane mosaic virus***: A negative result from testing a representative sample of a minimum of 2000 seeds, using an NPPO approved method, may be used to show the consignment is free of *Sugarcane mosaic virus*.

**References:**

- Dange SRS, Payak MM, Renfro BL, 1978. Seed transmission of *Pseudomonas rubrilineans*, the incitant of bacterial leaf stripe of maize. *Indian Phytopathology* 31(4):523-524.
- Forster RL, Seifers DL, Strausbaugh CA, Jensen SG, Ball EM, Harvey TL, 2001. Seed transmission of the High Plains virus in sweet corn. *Plant Disease* 85(7):696-699
- Lamka, G L; Hill, J H; McGee, D C; and Braun, E J. 1991: Development of an immunosorbent assay for seedborne *Pantoea stewartii* subsp. *stewartii* in corn seeds. *Phytopathology* 81:839-846
- Lebas, B.S.; Ochoa-Corona, F.M.; Elliot, D.R.; Tang, Z. and Alexander, B.J.R. 2005. Development of an RT-PCR for High Plains virus indexing scheme in New Zealand post entry quarantine. *Plant Disease*, 89:1103-1108.
- Shepherd, L.M. 1999: Detection and transmission of *Clavibacter michiganensis* subsp. *nebraskensis* of corn. Ms Thesis, Iowa State University, Ames, IA.

**Zea REGULATED PESTS (actionable)**

## Insect

## Insecta

## Bostrichidae

*Dinoderus distinctus*

bostrichid beetle

*Dinoderus minutus*

bamboo powderpost beetle

*Prostephanus truncatus*

larger grain borer

## Cucujidae

*Cathartus quadricollis*

squarenecked grain beetle

## Curculionidae

*Caulophilus oryzae*

broadnosed grain weevil

## Dermestidae

*Attagenus unicolor*

black carpet beetle

*Trogoderma glabrum*

khapra beetle

*Trogoderma granarium*

khapra beetle

*Trogoderma inclusum*

trogoderma beetle

*Trogoderma variabile*

warehouse beetle

## Histeridae

*Teretriosoma nigrescens*

## Languriidae

*Pharaxonotha kirschil*

Mexican grain beetle

## Melyridae

## Nitidulidae

*Carpophilus freemani*

dried fruit beetle

*Carpophilus lugubris*

dusky sap beetle

*Glischrochilus quadrisignatus*

four-spotted sap beetle

## Ptinidae

*Gibbium psylloides*

shiny spider beetle

## Scolytidae

*Pagiocerus frontalis*

bark borer

## Tenebrionidae

*Alphitobius laevigatus*

black fungus beetle

*Cynaesus angustus*

larger black flour beetle

*Gnatocerus maxillosus*

slenderhorned flour beetle

*Latheticus oryzae*

longheaded flour beetle

*Palorus ratzeburgi*

smalleyed flour beetle

*Palorus subdepressus*

depressed flour beetle

*Tribolium freemani*

flour beetle

## Diptera

## Otitidae

*Euxesta stigmatias*

## Hemiptera

## Coreidae

	<i>Leptoglossus zonatus</i>	coreid bug
Lepidoptera		
	Cosmopterigidae	
	<i>Pyroderces rileyi</i>	pink scavenger caterpillar
Noctuidae		
	<i>Sesamia calamistis</i>	pink stalk borer
	<i>Sesamia nonagrioides</i>	pink borer
Pyralidae		
	<i>Corcyra cephalonica</i>	rice moth
	<i>Doloessa viridis</i>	
	<i>Mussidia nigripenella</i>	pyralid moth
	<i>Paralipsa gularis</i>	stored nut moth
Tortricidae		
	<i>Cryptophlebia leucotreta</i>	false codling moth
Psocoptera		
	Liposcelidae	
	<i>Liposcelis bostrychophilus</i>	booklouse
	<i>Liposcelis entomophilus</i>	grain psocid
	<i>Liposcelis paetus</i>	booklouse
	Trogiidae	
	<i>Lepinotus reticulatus</i>	
Mite		
	Arachnida	
	Acarina	
	Pyemotidae	
	<i>Acaropsellina sollers</i>	
Fungus		
	Ascomycota	
	Dothideales	
	Botryosphaeriaceae	
	<i>Botryosphaeria zeae</i> (anamorph <i>macrophoma zeae</i> )	grey ear rot
	Pleosporaceae	
	<i>Cochliobolus pallescens</i> (anamorph <i>Curvularia pallescens</i> )	-
	<i>Cochliobolus tuberculatus</i> (anamorph <i>Curvularia tuberculata</i> )	leaf spot
	<i>Gloeocercospora sorghi</i>	zonate leaf spot
	Hypocreales	
	Clavicipitaceae	
	<i>Claviceps gigantea</i>	ergot
	Basidiomycota	
	Ustomycetes	
	Ustilaginales	

	Ustilaginaceae	
	<i>Ustilago maydis</i>	boil smut
Mitosporic Fungi (Coelomycetes)		
	Sphaerioidales	
	Sphaerioidaceae	
	<i>Stenocarpella macrospora</i>	dry rot of maize
	<i>Phaeocytostroma ambigum</i>	-
Mitosporic Fungi (Hyphomycetes)		
	Hyphomycetales	
	Moniliaceae	
	<i>Cephalosporium maydis</i>	
Oomycota		
	Sclerosporales	
	Sclerosporaceae	
	<i>Peronosclerospora heteropogoni</i>	
	<i>Peronosclerospora maydis</i>	Java downy mildew
	<i>Peronosclerospora philippinensis</i>	Philippine downy mildew
	<i>Peronosclerospora sacchari</i>	
	<i>Peronosclerospora sorghi</i>	sorghum downy mildew
	<i>Phaeocytostroma ambiguum</i>	
	Verrucalvaceae	
	<i>Sclerophthora rayssiae var. zaeae</i>	
Zygomycota		
Zygomycetes		
	Mucorales	
	Mucoraceae	
	<i>Rhizopus maydis</i>	rhizopus seed rot
	<i>Sclerophthora rayssiae var. zaeae</i>	
	<i>Stenocarpella macrospora</i>	dry rot
	<i>Ustilago maydis</i>	boil smut
Bacterium		
	Pseudomonadaceae	
	<i>Acidovorax avenae subsp. avenae</i>	bacterial blight
	Corynebacteriaceae	
	<i>Clavibacter michiganensis subsp. nebraskensis</i>	Goss' bacterial wilt
	Enterobacteriaceae	
	<i>Pantoea stewartii</i>	Stewart's bacterial wilt
Virus		
	<i>High plains virus</i>	
	Potyviridae	
	Potyvirus	
	<i>Maize chlorotic mottle virus</i>	MCMV
	<i>Maize dwarf mosaic virus</i>	MDMV

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	<i>Sugarcane mosaic virus</i>	SCMV
Weed		
Angiospermae		
Scrophulariales		
Scrophulariaceae		
<i>Striga asiatica</i>		witch-weed
<i>Striga hermonthica</i>		witch-weed

## Appendix 1: Definitions

Definitions have the same meaning as defined by the Act and ISPM 5: Glossary of Phytosanitary Terms (2012), unless set out below:

### **a.i.**

Active ingredient.

### **AOSA**

The Association of Official Seed Analysts is an organisation comprised of member laboratories which are staffed by certified seed analysts. Such seed testing facilities include official state, federal, and university seed laboratories across the United States of America and Canada.

### **Basic seed**

Refers to seed listed in the Plant Biosecurity Index under "Import Specification for Seed for Sowing".

### **BORIC**

Biosecurity Organisms Register for Imported Commodities: MPI database which informs on the quarantine status for an organism as either regulated or non-regulated for New Zealand.

### **Contamination**

Presence in a commodity, storage place, conveyance or container, of pests or other regulated articles, not constituting an infestation.

### **ELISA**

Enzyme linked immunosorbent assay.

### **EPA**

Environmental Protection Authority is responsible for administering the Hazardous Substances and New Organisms (HSNO) Act 1996.

### **Fleshy fruit**

Any fruit (matured ovary) that is succulent or semi-succulent e.g. a berry, drupe, pome.

### **Genetically modified organism (GM)**

Any organism in which any of the genes or any of the other genetic material has been modified by *in-vitro* techniques; or is inherited or otherwise derived, through any number of replications, from any genes or other genetic material which has been modified by *in-vitro* techniques. [as defined by the HSNO Act 1996]

### **Growing season inspection**

Visual inspection by a person authorized by the NPPO during period or periods of the year when plants actively grow in an area, place of production or production site.

### **Herbaceous Indexing**

Virus detection and identification technique where plant viruses are transmitted mechanically or via a vector to a number of herbaceous indicator plants for the observation of characteristic symptoms.

### **ISTA**

International Seed Testing Association.

### **IPPC**

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

**Isolation**

Applies to PEQ facilities which must meet the minimum isolation requirements (from plants outside the PEQ facility) listed in this IHS.

**ISPM**

International Standard for Phytosanitary Measures are the international standards adopted by the Conference of FAO, the Interim Commission on Phytosanitary Measures or the Commission on Phytosanitary Measures, established under the IPPC [CEPM, 1996; revised CEPM, 1999].

**Level 1, Level 2 or Level 3 post-entry quarantine**

A system of post entry quarantine screening whereby seed is grown under certain specified conditions on a property approved to the Facility Standard: Post Entry Quarantine for Plants (MPI.STD.PEQ).

**MPL**

Maximum Pest Limit.

**NPPO**

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

**Officially tested**

Tested by a laboratory approved by the exporting country NPPO if performed offshore or by the importing country NPPO if performed on-shore

**PCR**

Polymerase chain reaction

**Pelleted seed**

Seed encased in a man-made nutritive or protective covering.

**PEQ**

Post Entry Quarantine. Quarantine applied to a consignment after entry.

**Permit**

A permit to import issued by MPI that specifies the conditions under which a particular commodity may be imported into New Zealand.

**Pest**

Any species, strain or biotype of animal or pathogenic agent (fungi, bacteria, viruses, viroids) injurious to plants or plant products.

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

**Plant Biosecurity Index**

MPI search system for identifying the status of plant species for importing to New Zealand.

**Pre-Germinated Seed**

Seed with only the radicle (embryonic root) emerged.

**Quarantine Pest**

A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled [FAO, 1990; revised FAO 1995; IPPC 1997].

**Quarantine Weed Seeds**

An invasive plant species as set out in the MPI Schedule of Regulated (Quarantine) Weed Seeds.

**Regulated Pest**

A quarantine pest or a regulated non- quarantine pest listed in BORIC as being regulated for New Zealand.

Note: If an intercepted organism is not listed in BORIC, the NPPO must contact MPI to establish the regulatory status.

**Representative sample**

A sample that is to be submitted to the approved testing laboratory and may comprise either the whole of the composite seed sample or a subsample thereof.

**SAC**

Seed Analysis Certificate

**Seed**

A unit of reproduction used for sowing. This includes spores but excludes vegetative propagules.

## Appendix 2: Amendment Record

Amendments to this IHS will be given a consecutive number and dated. The following table provides a summary of the main changes to this IHS for the previous five years.

No:	Details:	Date:
26	Revised schedules of special conditions for <i>Hordeum</i> and <i>Triticum</i> .	7/05/2009
27	Addition of schedule for <i>Linum usitatissimum</i> . Revised schedule of special conditions for <i>Fragaria</i> and <i>Ribes</i> . Removal of <i>Echinacea angustifolia</i> from section 1.5.2	19/03/2010
28	Removal of <i>Xanthomonas translucens</i> pv. <i>translucens</i> from the <i>Hordeum</i> and <i>Triticum</i> schedules. Revised schedule of <i>Zea</i> , including Japan as an approved country with the addition of <i>Gloeocercospora sorghi</i> to the pest list. Addition of a pea seed soak test on arrival in the <i>Pisum</i> schedule.	22/09/2010
29	Revised schedules of special conditions for <i>Acer</i> , <i>Carpinus</i> , <i>Carya ovata</i> , <i>Castanea</i> and <i>Quercus</i> to manage <i>Cryphonectria parasitica</i> .	16/09/2011
30	Addition of section 2.2.7 'Importation of Seed Products', section 2.2.8 'Seed for Sowing of New Zealand Origin' and section 2.4 'Equivalence'.	5/12/2011
31	Revised schedule for <i>Rubus</i> , and removal of [strains not present in New Zealand] from all listings of <i>Tomato ringspot virus</i> in <i>Fragaria</i> , <i>Rubus</i> , and <i>Vaccinium</i> schedules.	20/03/2012
32	Revised schedule of special conditions for <i>Citrus</i> .	3/04/2012
33	Updated fungicide treatment option for <i>Avena</i> , <i>Hordeum</i> and <i>Triticum</i> .	7/05/2012
34	Reformat of complete IHS, including all schedules.	29/06/2012
35	Correction to the <i>Zea</i> schedule: removal of <i>Maize mottle chlorotic stunt virus</i> from the quarantine requirements.	24/07/2012
36	Revision of Section 8 'Equivalence' and Section 9 'Biosecurity clearance'.	27/08/2012
37	New schedule for tomato ( <i>Solanum lycopersicum</i> ) and minor correction of <i>Macadamia</i> schedule.	19/10/2012
38	New schedule for <i>Brassica</i> (urgent amendment) and minor amendment to <i>Acrocomia</i> schedule.	19/04/2013
39	Revised schedule for <i>Malus</i> (apple) seed for sowing.	24/04/2013
40	Removal of schedule for <i>Brassica</i> , retaining schedule for <i>Brassica napus</i> .	02/08/2013
41	New schedule for grape ( <i>Vitis</i> spp.), incorporated as an urgent amendment.	08/08/2013
42	Addition of section 6 (Part A), 'Seed for sowing imported as laboratory specimens'. Revised schedule of special conditions for <i>Arabidopsis thaliana</i> (removal of requirement for a phytosanitary certificate). Revised schedules of special conditions for <i>Fragaria</i> , <i>Phaseolus</i> , <i>Ribes</i> , <i>Rubus idaeus</i> and <i>Vitis</i> (removal of <i>Tomato black ring virus</i> from the quarantine requirements).	12/12/2013
43	Addition of further approved fungicide treatments to the <i>Phaseolus</i> and <i>Pisum</i> schedules	19/6/2014
44	Revised schedule for <i>Zea mays</i> , specifying a seed sample size for <i>Maize dwarf mosaic virus</i> .	18/8/2014
45	New schedule for <i>Capsicum</i> and <i>Solanum</i>	19/8/2014

No:	Details:	Date:
46	New schedule for Cucurbitaceae and changes to <i>Zea mays</i> (urgent amendment)	1/12/2014
47	Revised schedule for <i>Zea mays</i> , clarifying the requirements for <i>Sugarcane mosaic virus</i> and <i>Maize chlorotic mottle virus</i>	7/8/2015
48	Publication of the CTO direction for all <i>Zea mays</i> consignment originated from Chile.	11/09/2015
49	New IHS format. Added section 1.6 (pre-determined testing in PEQ), amended phytosanitary certificate requirements and GM testing requirements.	26/11/2015
50	Reinstating section 6 (Part A) now section 1.9 Part 1: "Seed for sowing imported as laboratory specimens". Minor amendment for <i>Beta</i> and <i>Zea</i> schedule. Removal of <i>Barley mosaic virus</i> from the pest list of <i>Hordeum</i> and revised the schedule.	21/12/2015
51	Reinstating and revision of the requirements for species of <i>Rubus</i> and clarification of Section 1.9	21/01/2016
52	Addition to a paragraph related to importation of GMO seeds for research purposes and also the addition of the pathogen Andean potato mild mosaic virus (APMMV) to the <i>Solanum tuberosum</i> schedule as a regulated pest.	02/03/2016
53	Revised the <i>Capsicum</i> schedule: addition of PCFVd as a quarantine pest	09/10/2016
54	Orthographic corrections under <i>Zea</i> , <i>Triticum</i> and <i>Lavandula</i> schedules and amendment to the <i>Zea</i> schedule to allow for testing onshore for all quarantine pests listed in the <i>Zea mays</i> pest list, reformatting of Appendix 3: Declaration form to facilitate its use and the addition of a hyperlink to the protocol for GMO testing under the <i>Zea</i> schedule.	25/11/2016
55	Review of the Cucurbitaceae schedule: new measures for CGMMV and addition of KGMMV as a quarantine pest. Update of the <i>Capsicum</i> schedule.	26/01/2017
56	Removal of <i>Clover yellow mosaic virus</i> and <i>Red clover vein mosaic virus</i> . Addition of onshore testing for the <i>Agropyron</i> schedule. Update name of PEQ standard, update references to Level 3 PEQ to reflect requirements of the reissued PEQ standard.	09/03/2017
57	Addition of <i>Apiaceae</i> and <i>Petunia</i> schedules and other minor changes.	09/06/2017
58	Change to the treatment requirements for the <i>Apiaceae</i> schedule and other minor changes.	14/12/2017
59	Removal of pea soak test, addition of compulsory fumigation for pea seeds and migration of all approved treatments to MPI-STD-ABTRT.	22/02/2018
60	Addition of <i>Myrtaceae</i> Specific Requirements	11/07/2018
61	Addition of onshore testing for Grapevine yellow speckle viroid-2 to the specific requirements for <i>Vitis</i> .	11/01/2019
62	Addition of requirements for Tomato brown rugose fruit virus (ToBRFV) to specific requirements for <i>Capsicum</i> and <i>Solanum lycopersicum</i> .	19/03/2019
63	Review of the standard to remove errors and clarify ambiguities and current requirements as part of the tidying the room project.	02/09/2019
64	<i>Apiaceae</i> and <i>Cannabis sativa</i> specific requirements : Addition of onshore hot water treatment as a phytosanitary option; <i>Capsicum</i> and <i>Solanum lycopersicum</i> specific requirements: addition of molecular testing as an offshore	20/05/2020

No:	Details:	Date:
	<p>phytosanitary measure for <i>Tomato brown rugose fruit virus</i> and inclusion of guidance information that the ISHI-Veg local lesion bioassay is not accepted by MPI as a valid test for <i>Tomato brown rugose fruit virus</i>; <i>Petunia</i> specific requirements: addition of option for importers to provide a non-GMO declaration to meet the genetically modified (GM) requirements for <i>Petunia</i> seeds for sowing and removal of requirement for 'appropriate common name' to be specified on phytosanitary certificates for <i>Petunia</i> seeds for sowing.</p>	

## Appendix 3: Declaration Form

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

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

Note that under the Hazardous Substances and New Organisms (HSNO) Act 1996, the import and release of any genetically modified crop without approval from the Environmental Protection Authority (EPA) is unlawful.

I, \_\_\_\_\_ (Exporter's name and address)...

declare that according to the requirements set out in the Seed for Sowing Import Health Standard (MPI Import Health Standard: 155.02.05: Importation of Seed for Sowing - <http://www.mpi.govt.nz/document-vault/1151>,

Insert species name and lot/line number or unique identifier as stated on all the other import documentation

was produced neither "from" nor "by" genetically modified crops.

I undertake to inform immediately the importer and the Ministry for Primary Industries, MPI, New Zealand of any information that can undermine the accuracy of this declaration.

Note that MPI may request evidence as to how production, handling and transport of these seeds is performed in the field, or require and audit as a way to provide quality to the production system.

I \_\_\_\_\_ (Importer's name and address)...

declare to the best of my knowledge that according to the requirements set out in the Seed for Sowing Import Health Standard (MPI Import Health Standard: 155.02.05: Importation of Seed for Sowing - <http://www.mpi.govt.nz/document-vault/1151>,

Insert species name and lot/line number or unique identifier as stated on all the other import documentation

was produced neither "from" nor "by" genetically modified crops.

Signed by <b>Exporter</b> and Company Name (details) and date	Signed by <b>Importer</b> and Company Name (details) and date
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Warning: Any person who knowingly makes a statement of information or a declaration that is false or misleading in a material particular may on summary conviction, be sentenced to a term of imprisonment and/or fined not exceeding \$500,000.00.