MAF BIOSECURITY NEW ZEALAND

STANDARD 155.02.05

Importation of Seed for Sowing

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

MAF Biosecurity New Zealand
Ministry of Agriculture and Forestry
P O Box 2526
Wellington
New Zealand

Ministry of Agriculture and Forestry
Te Manatu Ahuwhenua, Ngaherehere

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REVIEW

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

ENDORSEMENT

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

_____

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

Date: 22 September 2010

AMENDMENT RECORD

Amendments to this standard will be given a consecutive number and will be dated.

No:	Entered by:	Details:	Date:
1	MAF Regulatory Authority	Not included	06/08/1998
2	MAF Regulatory Authority	Not included	17/03/1999
3	MAF Biosecurity Authority	Not included	01/07/1999
4	MAF Biosecurity Authority	Not included	16/08/1999
5	MAF Biosecurity Authority	Not included	28/06/2001
6	MAF Biosecurity Authority	Not included	27/09/2001
7	MAF Biosecurity Authority	Not included	21/03/2002
8	MAF Biosecurity Authority	Schedule of entry conditions for *Brassica napus*	01/10/2002
9	MAF Biosecurity Authority	Schedule of entry conditions for *Glycine*	01/01/2003
10	MAF Biosecurity Authority	Schedule of entry conditions for *Gossypium*	01/05/2003
11	MAF Biosecurity Authority	Schedule of entry conditions for *Acrocomia*, *Cocos*, *Corypha*, *Elaeis*, *Livistona* and *Phoenix*	19/05/2003
12	MAF Biosecurity Authority	Schedule of entry conditions for *Coffea*	24/06/2003

13	MAF Biosecurity Authority	Removal of sections 2.2.3 and 3.4 and insertion of revised section 3.3 *Importation of seed into post-entry quarantine*	04/08/2003
14	MAF Biosecurity Authority	Schedule of entry conditions for *Cicer*	22/09/2003
15	MAF Biosecurity Authority	Schedule of entry conditions for *Beta*, *Lens*, *Malus*, *Medicago*, *Prunus*, *Pyrus* and *Vaccinium*	24/11/2003
16	MAF Biosecurity Authority	Sections 1.1.1, 1.3, 2.3 and all schedules of special conditions	09/02/2004
17	MAF Biosecurity Authority	Schedule of entry conditions for *Actinidia* and *Papaver somniferum*	01/06/2004
18	MAF Biosecurity Authority	Section 1.6 and schedules of special conditions for *Agropyron*, *Beta*, *Fragaria*, *Hordeum*, *Humulus*, *Pisum* and *Ribes*	09/08/2004
19	Biosecurity New Zealand	Schedules of special conditions for *Avena*, *Hordeum*, *Pisum*, *Phaseolus*, *Triticum and Vicia*	07/12/2004
20	Biosecurity New Zealand	Schedule of special conditions for *Zea*	25/05/2005
21	Biosecurity New Zealand	Schedules of special conditions for *Avena*, *Cannabis*, *Hordeum*, *Pisum*, *Triticum*, *Vicia* and *Zea*	26/09/2005
22	Biosecurity New Zealand	Schedule of special conditions for *Anethum*	14/10/2005
23	Biosecurity New Zealand	Schedule of special conditions for *Brassica*, *Glycine*, *Medicago* and *Zea*	30/11/2006
24	MAF Biosecurity New Zealand	Sections 1, 2,3; schedules of special conditions for *Anethum* (removed), *Arbidopsis thaliana (permit required) Avena*, *Hordeum*, *Triticum* and *Zea* (removal of *Wheat streak mosaic virus*); *Phaseolus* and *Vicia* (removal of *Colletrotrichm truncatum)*	03/12/2007
25	MAF Biosecurity New Zealand	Sections 1 & 2; inclusion of section 2.2.6 Genetically modified seed testing; revised schedules of special conditions for *Corylus* (new), *Cucurbita pepo* (new), *Arabidopsis thaliana*, Zea, *Brassica Napus*, *Glycine* and *Medicago*.	21/04/2009
26	MAF Biosecurity New Zealand	Revised schedules of special conditions for *Hordeum* and *Triticum*.	7/05/2009
27	MAF Biosecurity New Zealand	Addition of schedule for *Linum usitatissimum*; Revised schedules of special conditions for *Fragaria* and *Ribes;* removal of *Echinacea angustifolia* from section 1.5.2.	19/03/2010
28	MAF Biosecurity New Zealand	Removal of *Xanthomonas translucens pv translucens* from the *Hordeum* and *Triticum* schedules. Revised schedule of Zea, including Japan as an approved country with the addition of *Gloeocercospora sorghi* to the pest list. Addition of pea seed soak test on arrival in *Pisum* schedule.	22/09/2010

1 INTRODUCTION

1.1 SCOPE

This standard describes the Import Specification and Entry Conditions for seeds imported into New Zealand for sowing.

1.1.1 OFFICIAL CONTACT POINT (NEW ZEALAND NATIONAL PLANT PROTECTION ORGANISATION)

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

Biosecurity New Zealand
Ministry of Agriculture and Forestry
PO Box 2526
Wellington
NEW ZEALAND
Fax: +64 4 894 0662
E-mail: plantimports@maf.govt.nz
Website: http://www.biosecurity.govt.nz

1.2 REFERENCES

The following Acts, Regulations and MAF Biosecurity standards are referred to, or complement, the implementation of this import health standard:

- International Plant Protection Convention (IPPC), FAO, Rome 1997
- Biosecurity Act 1993
- Biosecurity (Costs) Regulations
- Hazardous Substances and New Organisms Act 1996 (HSNO Act 1996)
- MAF Biosecurity Standard PBC-NZ-TRA-PQCON: Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator.

1.3 DEFINITIONS AND ABBREVIATIONS

ai
Active ingredient.

Basic
The basic conditions with which all consignments of seed must comply, unless their import conditions are covered by a schedule of special conditions.

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

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

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

a. has been modified by *in-vitro* techniques; or

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

Import Health Standard (IHS)
A statement approved under section 22 of the Biosecurity Act 1993 by a chief technical officer of the conditions that must, if an import is to be made, be met in the country of origin or export, during transit, during importation and quarantine, and after introduction.

Inspector
Inspector under the Biosecurity Act (1993).

ISTA
International Seed Testing Association.

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

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

Level 1, Level 2 or Level 3 Quarantine
A system of post entry quarantine screening whereby seed is grown under certain specified conditions on a property and by a person registered by MAF as specified in MAF Regulatory Authority Standard 155.04.01: Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator.

MAF
The New Zealand Ministry of Agriculture and Forestry.

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

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

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

Permit (Permit to Import)

A Permit to Import issued by MAF Biosecurity New Zealand that specifies the conditions under which a particular commodity may be imported into New Zealand.

Pest

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

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

Pest free area

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

Pest free place of production

Place of production in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained for a defined period [ISPM Pub. No. 10, 1999]

Phytosanitary Certificate

The certificate is issued by the exporting country's NPPO, in accordance with the requirements of the IPPC, to verify that the requirements of the relevant import health standard have been met. The certificate must follow the pattern set out in the model phytosanitary certificate, ISPM Pub. No. 12, 2001, "Guidelines for phytosanitary certificate".

Post Entry Quarantine (PEQ)

The quarantine conditions [either Level 3 or Level 1/Level 2] under which certain seeds must be grown.

Pre-Germinated Seed

Seed with only the radicle (embryonic root) emerged.

Quarantine Pests (Regulated Organisms)

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

Reference Index

Plants Biosecurity Index.

SAC

Seed Analysis Certificate.

Seed

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

1.4 GENERAL

Seeds of plant species for which entry conditions have been developed are listed in the MAF Biosecurity New Zealand Plants Biosecurity Index http://www1.maf.govt.nz/cgi-bin/bioindex/bioindex.pl

If a species is not listed in the Plants Biosecurity Index, it means that conditions for import into New Zealand have not been developed. Proposals for the deliberate introduction of new organisms (including genetically modified organisms) as defined by the Hazardous Substances and New Organisms Act 1996 should be referred to:

Environmental Risk Management Authority
PO Box 131
Wellington
NEW ZEALAND
Phone: +64 4 916 2426
Fax: +64 4 914 0433
E-mail: info@ermanz.govt.nz
Website: http://www.erma.govt.nz

If a plant species is not included in the Plants Biosecurity Index, but is considered by an importer to be established in New Zealand, the applicant should provide information, including supporting evidence capable of being verified, to ERMA.

If ERMA approves an application, MAF Biosecurity New Zealand will undertake pest risk analyses and develop import health standards in accordance with the requirements of the Biosecurity Act 1993.

For plant species requiring phytosanitary certification entry conditions are given in section 3.6 of this standard. Pest risk analyses are required for imports of these species for countries other than those listed.

MAF Biosecurity New Zealand can be contacted for information on permit application procedures, risk analyses and import health standards at the following address:

Plant Imports
MAF Biosecurity New Zealand
Ministry of Agriculture and Forestry
PO Box 2526
Wellington
NEW ZEALAND
Fax: +64 4 894 0662
E-mail: plantimports@maf.govt.nz

1.5 APPENDICES

1.5.1 QUARANTINE IMPURITIES

No seed lot will be released for sowing in New Zealand if it contains:

- unidentified seed
- regulated pests
- in excess of 0.1% by weight of soil particles
- seed of any of the quarantine weed species listed in the schedule below

1.5.2 SCHEDULE OF REGULATED (QUARANTINE) WEED SEEDS

Acacia nilotica
Acaena affinis
Acaena aridula
Acaena echinata
Acaena ovalifolia
Acaena pinnatifida
Acaena sericea
Acaena subantarctica
Acanthospermum hispidum
Achnatherum calamagrostis
Acroptilon repens
Actinidia henanensis
Actinidia rubricaulis
Adonis microcarpa
Aethusa cynapium
Ageratina adenophora
Ageratina altissima
Ageratina riparia
Ageratum conyzoides
Agrimonia procera
Ailanthus altissima
Amaranthus blitoides
Ambrosia deltoidea
Ambrosia tenuifolia
Andropogon virginicus
Anemia californica
Anemia intermedia
Arceuthobium (all species)
Arctium minus
Argemone munita
Aristida pallens
Artemisia verlotiorum
Arundo donax
Asclepias tuberosa
Aspalathus linearis
Aspalathus nivea
Baccharis halimifolia
Berberis canadensis
Berberis fendleri
Berberis glaucocarpa
Berberis haematocarpa
Berberis trifoliolata
Berkheya rigida
Brayulinea densa
Buddleja davidii
Calicotome spinosa
Callilepis laureola
Calotis lappulacea
Cannabis sativa
Cardaria chalepensis
Cardaria pubescens
Carduus (all species except *C. pycnocephalus* & *C. tenuiflorus*)
Carduus acanthoides
Carduus nutans
Carex aurea
Carex baldensis
Carex longebrachiata
Carex pseudocyperus
Carthamus lanatus
Castanospermum australe
Cenchrus caliculatus
Cenchrus echinatus
Cenchrus incertus
Centaurea repens
Cephalaria syriaca
Cestrum elegans
Cestrum laevigatum
Chamaecrista rotundifolia
Chloris virgata
Chondrilla juncea
Chromolaena odorata
Chrysopogon aciculatus
Cineraria lyrata
Cirsium acaule
Cirsium badakhschianicum
Cirsium crinitum
Cirsium esculentum
Cirsium kamtschaticum
Cirsium scariosum
Cirsium scopulorum
Clematis tangutica
Clidemia hirta
Cnicus benedictus
Conium maculatum
Cortaderia (all species except *C. fulvida, C. jubata, C. richardii,C. selloana, C. splendens, C. toetoe* & *C. turbaria*)
Cotoneaster franchetii
Cotoneaster glaucophyllus
Cotoneaster simonsii
Crataegus monogyna
Crocosmia xcrocosmiiflora
Cryptostegia madagascariensis
Cuscuta europaea
Cuscuta planiflora
Cuscuta suaveolens
Cymbopogon schoenanthus
Cynanchum africanum
Cynanchum auriculatum
Cynanchum floribundum
Cynanchum marnieranum
Cynanchum nigrum
Cynanchum nodosum
Cynanchum perrieri
Cyperus esculentus
Cyperus glaber
Cyperus rotundus
Cytisus multiflorus
Cytisus scoparius
Datura metel
Dendrophthora
Digitaria abyssinica
Drymaria arenarioides
Echinops ruthenicus
Eclipta alba
Eclipta prostrata
Egeria (all species)
Eichhornia azurea
Eichhornia crassipes
Elaeagnus xreflexa
Eleocharis dulcis
Emex australis
Emex spinosa
Ephedra sinica
Equisetum fluviatile

Eragrostis trichodes
Eremocarpus setigerus
Erica cinerea
Erica lusitanica
Euonymus japonicus
Euonymus monbeigii
Euphorbia esula
Ficus rubiginosa
Galega officinalis
Galeobdolon luteum
Geitonoplesium cymosum
Ginalloa (all species)
Gymnema balsamica
Gymnema dentata
Gymnema viscida
Hakea lissocarpha
Halogeton glomeratus
Hedera helix
Helianthus ciliaris
Heliotropium amplexicaule
Heteropogon contortus
Hieracium alpinum
Hieracium bombycinum
Hieracium lachenalii
Hieracium lanatum
Hieracium maculatum
Hieracium pilosella
Hieracium villosum
Hieracium waldsteinii
Hippobroma longiflora
Hippuris vulgaris
Homeria collina
Homeria comptonii
Homeria miniata
Hyparrhenia (all species)
Hypericum androsaemum
Impatiens oncidioides
Ipomoea caerulea
Ipomoea hederacea
Ipomoea plebeia
Ipomoea triloba
Iva axillaris
Ixia aquatica
Jasminum polyanthum
Juglans ailantifolia
Kyllinga monocephala
Leycesteria formosa
Ligustrum sinense
Lycium chilense
Lycium ferocissimum
Lycium tenuispinosum
Macfadyena unguis-cati
Marsilea mutica
Melianthus major
Mikania cordata
Mikania micrantha
Monarda punctata
Monochoria hastata
Monochoria vaginalis
Montanoa hibiscifolia
Myagrum perfoliatum
Myrica californica
Myrica nana
Najas (all species except *N. guadalupensis* & *N. marina*)
Nassella neesiana
Nassella trichotoma
Nassella viridula
Nephrolepis cordifolia
Notothixos
Nuytsia floribunda
Nymphoides aquatica
Onopordum acanthium
Onopordum acaulon
Onopordum illyricum
Onopordum tauricum
Oplopanax horridum
Opuntia aurantiaca
Opuntia ficus-indica
Opuntia imbricata
Opuntia stricta
Ornithoglossum viride
Orobanche ramosa
Orobanche spp. (except *O. minor*)
Oxylobium lanceolatum
Panicum repens
Paraserianthes lophantha
Parthenium hysterophorus
Passiflora ampullacea
Passiflora caerulea
Peganum harmala
Pennisetum orientale
Pennisetum pedicellatum
Pennisetum polystachion
Peraxilla flavida
Petasites hybridus
Phoradendron
Phrynium dubium
Phrynium limosum
Phrynium reniforme
Pistia stratiotes
Plectranthus ecklonii
Plectranthus grandis
Polygala myrtifolia
Polygonum bistorta
Proboscidea altheaefolia
Prosopis pallida
Pueraria lobata
Racosperma longifolium
Racosperma paradoxum
Ranunculus acris
Rhamnus purshiana
Rhodomyrtus tomentosa
Rubus ellipticus
Rubus moluccanus
Sagittaria graminea
Sagittaria latifolia
Sagittaria subulata
Salvinia molesta
Sambucus nigra
Scolymus hispanicus
Scolymus maculatus
Senecio jacobaea
Senecio pterophorus
Senna occidentalis
Setaria lutescens
Silybum marianum
Solanum elaeagnifolium
Solanum mauritianum
Sorghum almum
Sorghum halepense
Sorghum x almum
Spartina alterniflora
Spartina anglica
Spartina xtownsendii
Spirodela polyrrhiza
Sporobolus poiretii
Stipa calamagrostis
Stipa gigantea
Stipa hohenackerana
Stipa pennata
Stipa tenacissima
Striga (all species)
Strychnos nux-vomica
Tagetes minuta
Teline monspessulana
Thamnochortus insignis
Themeda quadrivalvis
Thunbergia grandiflora
Tourrettia
Trapa bicornis
Trianthema portulacastrum
Tribulus cistoides
Tribulus terrestris
Ulex europaeus
Urtica dioica
Utricularia biflora
Vallisneria spiralis
Veratrum album
Verbesina encelioides
Vinca major
Viscaceae (all genera and species)
Viscum album
Xanthium spinosum
Xanthium strumarium
Zigadenus venenosus
Zizania (all species except *Z. latifolia*)

Note: Interception of other seeds above the Maximum Pest Limit of 0.01% [ie. acceptance number is zero in a sample(s) drawn and analysed by a MAF Biosecurity New Zealand approved method (eg. International Seed Testing Association (ISTA) sampling methods (*ISTA International Rules for Seed Testing, Seed Science and Technology 24, 1996*) will result in the consignment being held until an assessment has been made in comparison with the risk of importing the plant species concerned.

1.6 CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES

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

A CITES import permit, issued by the Department of Conservation, may also be required by New Zealand legislation for specimens of selected species. Importers are advised to contact the Department of Conservation (http://www.doc.govt.nz/) for further information.

2 IMPORT SPECIFICATION AND ENTRY CONDITIONS

2.1 IMPORT SPECIFICATION

The Import Specification for seed for sowing is:

2.1.1 FOR QUARANTINE PESTS OTHER THAN WEED SEEDS:

Pest contamination shall not exceed the Maximum Pest Limit (MPL) of 0.9 pests or infected seeds per kg of seed.

To achieve 95% confidence that the MPL (of 0.9 pests or infected seeds per kg of seed) will not be exceeded, no quarantine pests are permitted in an officially drawn sample of 5kg, or in the whole consignment if less than 5kg (ie. acceptance No. = 0).

2.1.2 FOR QUARANTINE WEED SEEDS:

Quarantine weed seed contamination shall not exceed the MPL of 0.01%.

To achieve 95% confidence that the MPL (of 0.01% probability) will not be exceeded, no quarantine weed seeds are permitted (ie. acceptance No. = 0) in a sample(s) drawn and analysed by a MAF Biosecurity New Zealand approved method [eg. International Seed Testing Association (ISTA) sampling methods (*ISTA International Rules for Seed Testing, Seed Science and Technology 24, 1999*) are approved by the MAF Biosecurity New Zealand)].

2.2 ENTRY CONDITIONS

2.2.1 CATEGORIES OF ENTRY CONDITIONS

The following entry conditions have been developed to ensure that seed imported for sowing will meet the Import Specification:

a. **Basic Conditions** that all seed consignments must meet as indicated in the Plants Biosecurity Index and outlined in Section 2.2.2.
AND
b. **Special Conditions** that apply to particular seed consignments, as indicated in the Plants Biosecurity Index and outlined in the **Schedule of Special Conditions** (see Section 3).

Note: On arrival in New Zealand, all seed consignments require inspection for visually detectable pests, unless otherwise specified in this import health standard.

2.2.2 BASIC CONDITIONS

2.2.2.1 Cleanliness

All seed shall be in clean, new packages. Any seed from fleshy fruits shall have all traces of flesh removed with the exception of seed of approved (i.e. listed in the Plants Biosecurity Index) Orchidaceae, which may be imported in dry/green pods.

2.2.2.2 Labelling

Each type of seed in the consignment must be clearly identified by its botanical name to species level.

Note: Numbering or coding of packets is acceptable provided an accompanying list is provided linking this to the botanical names.

2.2.2.3 Phytosanitary Certificate

a. For seed listed in the Plants Biosecurity Index as "Basic"

The Importer may elect one of the following two options:

OPTION 1: Seed with a phytosanitary certificate

(i) The consignment is to be accompanied by a phytosanitary certificate certifying that seed for sowing 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 current import requirements. If visually detectable pests are found which are not listed in the import health standard, the certifying NPPO must establish their regulatory status prior to issuing the certificate. This information is available in MAF's "Biosecurity Organisms Register for Imported Commodities": http://www.maf.govt.nz/biosecurity/pests-diseases/registers-lists/boric/

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

(ii) for pre-germinated seed, certifies that the seed has been germinated in an inert medium such as perlite or vermiculite.

Compliance with the above will result in biosecurity clearance.
(Note: audit samples may be drawn).

OPTION 2: Seed without a phytosanitary certificate

On arrival in New Zealand the consignment or samples, drawn in accordance with MAF Biosecurity New Zealand approved sampling rules, are to be inspected by a MAF inspector at the Importer's expense. Biosecurity clearance will be given if the seed meets the basic conditions.

b. For Seed listed in the Plants Biosecurity Index as "see 155.02.05 under....."

(i) The consignment is to be accompanied by a phytosanitary certificate issued by the national plant protection organisation in the country of origin, which certifies that the seed has been inspected in the exporting country according to appropriate procedures and conforms with New Zealand's current entry conditions. The certificate must include any additional declaration(s) listed in the Schedule of Special Conditions (see section 3).

(ii) for pre-germinated seed, certifies that the seed has been germinated in an inert medium such as perlite or vermiculite.

2.2.2.4 Seed Analysis

The Importer may elect one of the following two options:

Option 1: Seed accompanied by a SAC

The seed is to be accompanied by a Seed Analysis Certificate, documenting the status of the seed with respect to quarantine impurities, which shall:

(i) be issued by a MAF Biosecurity New Zealand accepted seed testing station (ISTA or AOSA accredited Seed Testing Stations are accepted by the MAF Biosecurity New Zealand).

(ii) show the actual weight of the sample examined.

(iii) be endorsed that the sample has been officially drawn from an identified seed lot.

(iv) be endorsed that the minimum size of the sample examined was as prescribed for the determination of other species by number in the International Rules for Seed Testing, as published in *Seed Science and Technology 24, 1996*.

(v) give 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).

(vi) give the percentage of soil particles found in the sample.

(vii) certify that none of the quarantine weed seeds listed in Appendix 1.5.2 of this standard were present in the sample.

Option 2: Seed not accompanied by a SAC

On arrival in New Zealand, samples of the seed will be inspected by MAFBNZ Inspectors or, where appropriate, sent to a MAF approved seed testing laboratory for analysis for weed seeds and other contaminants at the importer's expense.

Should the consignment not comply with New Zealand's phytosanitary conditions, the importer will be given the option of treatment (where available), reshipment, or destruction of the consignment at the importer's expense.

2.2.3 IMPORTATION OF PELLETED SEED

2.2.3.1 Additional Declarations

Any pest/disease additional declarations required for seed in the schedule must also be provided for pelleted seed.

2.2.3.2 Seed Analysis

Samples for seed analysis may be drawn before or after the seed is pelleted. For samples drawn prior to pelleting:

a. The pelleted seed is to be accompanied by the SAC issued for the seed lot from which the seed sample was drawn.

b. The phytosanitary certificate is to include a declaration that the pelleted seed is from the same lot of seed as the accompanying SAC.

For samples drawn after pelleting OR when pelleted seed is not accompanied by correct documentation:
A random sample of 10% or 25 seed, whichever is smaller, is to be drawn and the seed "coating" removed by physical cracking or washing to ensure no restricted seed or other contaminants are pelletised.

MAFBNZ will accept an accompanied phytosanitary certificate and SAC in lieu of inspecting pelleted seed on arrival.

2.2.4 IMPORTATION OF SEED IN HERMETICALLY SEALED CONTAINERS/PACKAGES

a. Private Consignments

All private consignments (not for resale) of seed in hermetically sealed containers/packages shall be inspected on arrival for contamination and/or signs of pest and disease. Seed in hermetically sealed containers/packages requiring only Basic Entry Conditions may be imported without a PC. However, for seed that requires additional declarations, treatments or quarantine, the genus and species names and endorsements must be presented on an accompanying PC.

b. Commercial Consignments

All lines of commercial consignments of seed in hermetically sealed containers/packages shall be sampled for inspection as specified in the sampling plan below. A "line" is a species sourced from any one supplier from one country per consignment.

No. of packages in Line	Inspection Sample Size (No. of packages)
1-50	2
51-100	3
101-200	4
201-350	6
351-500	8
501-750	10
751-1,200	12
1,201-2,000	15
2,001-3,500	20
3,501-5,000	25
Over 5,000	40

Where seed is accompanied by a Seed Analysis Certificate, the declaration may be accepted in lieu of inspection. All documentation offered must be originals.

Verification audits may be conducted by MAF to ensure confidence in the declarations. Where both a SAC and PC are supplied, a 1 in 20 verification audit will be conducted to ensure confidence in the documentation offered by the importer. If the audit fails the next 10 consignments for this importer are to be inspected. Respective work sites must keep records of these audits. When contaminants are found on one cultivar in a lot, all other cultivars in that lot must be inspected. If the latter cultivars are found to be clean, they can be released.

Where packets are not intact, or the where the contents can be seen without opening to be inconsistent with the labelling, further sampling will be required.

2.2.5 IMPORTATION OF SEED MIXTURES

a. A list of all **species** in the mixture is to accompany the consignment.

b. The entry requirements for each **species** in the mixture are to be met.

2.2.6 GENETICALLY MODIFIED SEED TESTING

For information on genetically modified (GM) sampling and testing protocols, including approved testing laboratories, please refer to the following MAF Biosecurity New Zealand website: http://www.biosecurity.govt.nz/regs/imports/plants/gmo

Only original or pdf versions of GM seed testing certificates are acceptable. Importers of consignments that arrive without GM seed testing certificates as required by this import health standard have the following four options available to them:

- reship
- destroy
- have the consignment sampled and the sample forwarded to an approved testing laboratory to determine if GM material is present
- apply for a Permit to Import to grow seed in Post-Entry Quarantine (PEQ)

Note: The current testing protocol offers the option of importing from areas considered free of commercial GM production. This is known as ‘area freedom’ and is granted on a crop:country basis. No such areas have been assessed and granted at this time. Importers cannot use area freedom as a reason for no GM seed test certificates being presented.

2.3 COMPLIANCE PROCEDURES

On arrival in New Zealand the consignment and all associated documentation will be inspected by an Inspector to ensure compliance with the requirements of this standard and the Biosecurity Act 1993.

For all imported consignments of seeds for sowing, MAF reserves the right to validate all testing and audit all treatment processes that have been undertaken. Audits will be conducted

on a regular basis and at the expense of the importer.

Seed that does not meet the requirements described in this import health standard (e.g., additional declarations not provided for all regulated pests) will not be given biosecurity clearance on arrival in New Zealand. The importer will be given the option of an equivalent measure if appropriate (e.g., testing or treatment), reship or destroy the consignment. Such treatments must be carried out in a facility accredited to the MAF Standard *General Transitional Facilities for Uncleared Goods (TF Gen)*, and according to MAF standard *BMG-STD-TREAT: Approval of Suppliers Providing Treatment of Imported Risk Goods and Forestry/Plant Related Material for Export.*

3. SCHEDULE OF SPECIES REQUIRING ADDITIONAL DECLARATIONS AND/OR POST ENTRY QUARANTINE

3.1 NOTES TO THE SCHEDULE

All seed imported for sowing must meet the basic conditions outlined in section 2.2.2.

Seeds listed in the Schedule have additional requirements, which may include:

- a Permit to Import.
- additional declarations on the Phytosanitary Certificate.
- a requirement for Post Entry Quarantine.

3.2 PERMIT TO IMPORT

Where a Permit to Import is required, an application should be made to Plant Imports stating:

a. the botanical name of the seed (to the species level)

b. the quantity required

c. the country (and state if applicable) of origin of the seed

d. the intended site where the seed will be grown, if a period of post entry quarantine is required

Note: If a species specific import health standard is approved and issued by the Chief Technical Officer prior to the expiry date indicated on a Permit to Import, the conditions on the species specific import health standard, if different, shall override the conditions on the Permit to Import.

3.3 IMPORTATION OF SEED INTO POST ENTRY QUARANTINE

Seed of species which have requirements additional to the basic conditions (as described in section 3.5) may be imported from any country into post-entry quarantine without an accompanying phytosanitary certificate with the required additional declarations, providing that:

- the consignment meets the basic conditions described in section 2; and
- the consignment is accompanied by a valid permit to import.

The permit to import must be obtained prior to import and will specify:

- the information required in section 3.2; and
- the level of post entry quarantine required and the location of the quarantine facility; and
- the inspection, testing and treatment requirements; and
- the minimum quarantine period.

The post-entry quarantine requirements, as specified by the permit to import, must be carried out in a facility accredited to MAF standard PBC-NZ-TRA-PQCON: *Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator*. The level of post entry quarantine specified will be sufficient to minimise the possibility of entry of associated pests. In accordance with the conditions on the permit to import, the seed will be grown for a minimum quarantine period and will be tested, treated or inspected for regulated pests at the expense of the importer.

Any treatments required by the permit to import must be carried out in a facility accredited to MAF standard 152.04.03F *Requirements for Holding and Processing Facilities* (Class: Transitional Facilities) for Uncleared Risk Goods, according to MAF standard BMG-STD-TREAT: *Approval of Suppliers Providing Treatment of Imported Risk Goods and Forestry/Plant Related Material for Export*.

3.4 AMENDMENTS TO THE PLANTS BIOSECURITY INDEX

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

The Plants Biosecurity Index will be continuously updated on the MAF web site (http://www1.maf.govt.nz/cgi-bin/bioindex/bioindex.pl). The information provided within the web site copy of the Plants Biosecurity Index is only intended to be general information to the public. It is not intended to take the place of, or to represent, the written law of New Zealand or other official guidelines or requirements.

3.5 SCHEDULE OF SPECIAL CONDITIONS

The following pages list the seeds that either have additional requirements to the basic conditions, or have approved species specific import health standards.

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Abies*".

GENERAL CONDITIONS:

For the approved plant species for which **NO** species specific import health standards have been developed, the following conditions apply:

Countries: All

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

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declaration:

"The seed has been treated with _____ (insert one of the options below) _____ at 2g a.i. per kg seed."

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

captan
thiram

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Acer*".

GENERAL CONDITIONS:

For the approved plant species for which **NO** species specific import health standards have been developed, the following conditions apply:

Countries: All

Quarantine Pests: *Cryphonectria parasitica*

Entry Conditions: **Basic;** PLUS

1. A prior Permit to import is required:

PEQ: Level 1
Minimum Period: 1 growing season
Isolation: 50 metres

2. Phytosanitary Certificate Additional Declarations:

(a) "*Cryphonectria parasitica* is not known to occur in _____ (the country, or state where the seed was produced) _____"

OR

"The seed was collected from trees that have been officially inspected and found to be free of diseases caused by *Cryphonectria* spp."

(b) "The seed has been treated with _____ (insert one of the options below) _____ at 2g a.i. per kg seed."

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

captan
thiram

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Acrocomia*".

1. Entry conditions for *Acrocomia* seeds for sowing from approved exporting countries

(i) *Pests of* Acrocomia
Coconut cadang-cadang viroid

Note: Seed covered in a fleshy pericarp will not be permitted entry into New Zealand.

(ii) *Approved exporting countries*
All countries except Guam, the Philippines and the Solomon Islands.

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Acrocomia* seeds for sowing imported into New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by the MAF have been undertaken.
The *Acrocomia* seeds for sowing have:

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

AND

– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Acrocomia* seeds for sowing in this consignment have:

– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

Actinidia

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Actinidia*".

Entry conditions for *Actinidia* seeds from approved countries
These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Actinidia
Refer to the pest list.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Actinidia* seed for sowing imported into New Zealand.
Import permit: an import permit is required.

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

The *Actinidia* seeds for sowing have been:
- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

(v) *Additional declarations to the phytosanitary certificate*
No additional declarations are required.

(vi) *Post-entry quarantine*
PEQ: All *Actinidia* seeds must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator*.
Quarantine Period: The seed will be grown for a minimum period of 6 months and will be inspected and/or tested for regulated pests at the expense of the importer. Six months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

Pest List for *Actinidia*

REGULATED PESTS (actionable)

Virus

genus Capillovirus	
Apple stem grooving virus [Actinidia infecting strain]	-

NON-REGULATED PESTS(non-actionable)

Fungus	
Ascomycota	
Diaporthales	
Valsaceae	
Diaporthe actinidiae	phomopsis canker
Diaporthe perniciosa (anamorph *Phomopsis mali*)	canker
Dothideales	
Botryosphaeriaceae	
Botryosphaeria dothidea (anamorph *Fusicoccum aesculi*)	canker
Botryosphaeria parva (anamorph *Fusicoccum parvum*)	canker
Botryosphaeria stevensii (anamorph *Diplodia mutila*)	botryosphaeria canker
Hypocreales	
Hypocreaceae	
Gibberella acuminata (anamorph *Fusarium acuminatum*)	fusarium storage rot
Nectria haematococca (anamorph *Fusarium solani*)	fusarium fruit rot
Leotiales	
Sclerotiniaceae	
Botryotinia fuckeliana (anamorph *Botrytis cinerea*)	grey mould
Sclerotinia sclerotiorum	cottony rot
Phyllachorales	
Phyllachoraceae	
Glomerella cingulata (anamorph *Colletotrichum gloeosporioides*)	anthracnose
Zygomycota: Zygomycetes	
Mucorales	
Mucoraceae	
Rhizopus stolonifer	rhizopus soft rot
mitosporic fungi (Coelomycetes)	
Sphaeropsidales	

Sphaerioidaceae	
Fusicoccum luteum	bunch rot
Phoma exigua	phoma rot
Phoma macrostoma	fruit and leaf spot
unknown Coelomycetes	
unknown Coelomycetes	
Colletotrichum acutatum	anthracnose
mitosporic fungi (Hyphomycetes)	
Hyphomycetales	
Dematiaceae	
Alternaria alternata	black stalk rot
Cladosporium oxysporum	cladosporium leaf spot
Moniliaceae	
Acremonium alternatum	-
unknown Hyphomycetes	
unknown Hyphomycetes	
Aureobasidium pullulans	seed rot

Bacterium

Pseudomonadaceae	
Pseudomonas viridiflava	leaf blight

Inspection, Testing and Treatment Requirements for *Actinidia*

ORGANISM TYPES	**NZ MAF ACCEPTABLE METHODS** (See notes below)
Virus	
Apple stem grooving virus [*Actinidia* infecting strain]	ELISA (Bioreba or Loewe) or PCR (Clover *et al*., 2003), AND herbaceous indicators Cq, Nb, Ng, No and Pv.

Notes:

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. Enzyme linked immunosorbent assay (ELISA); Polymerase chain reaction (PCR).
4. 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.
5. PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.
6. Positive and negative controls must be used in ELISA tests.
7. Positive and negative controls (including a blank water control) must be used in PCR. Ideally positive internal controls and a negative plant control should be used. Internal controls in PCR tests are important to avoid the risk of false negatives.
8. Inspect *Actinidia* plants for signs of pest and disease at least twice per week during periods of active growth and once per week during dormancy.
9. With prior notification, MAF will accept other internationally recognised testing methods.

References

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

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Agropyron*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Tilletia controversa*; other Ustilaginales; *Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Agropyron* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Tilletia controversa*

OR

- a representative sample of 600 seeds, drawn from this consignment according to the International Seed Testing Association's methodology, has been tested for *Tilletia controversa*

AND

- treated with one of the following fungicide combinations, either
  - i) Carboxin at 0.8g a.i. per kg seed and thiram at 1g a.i. per kg seed.
  - (ii) Carboxin at 0.8g a.i. per kg seed and captan at 0.7g a.i. per kg seed.
  - (iii) Imazalil at 80mg a.i. per kg seed and triadimenol at 220mg a.i. per kg seed.
  - (iv) Imazalil at 80mg a.i. per kg seed and flutriafol at 80mg a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

(a) "*Tilletia controversa* is not known to occur in _____ (the country or state where the seed was produced) _____".

OR

"The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Tilletia controversa* was detected".

OR

"No spores of *Tilletia controversa* were found in an officially drawn representative sample of 600 seeds".

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Agrostis*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Trogoderma* spp.; Ustilaginales

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Agrostis* seeds for sowing have been:

- treated with one of the following fungicide combinations, either
  - i) Carboxin at 0.8g a.i. per kg seed and thiram at 1g a.i. per kg seed.
  - (ii) Carboxin at 0.8g a.i. per kg seed and captan at 0.7g a.i. per kg seed.
  - (iii) Imazalil at 80mg a.i. per kg seed and triadimenol at 220mg a.i. per kg seed.
  - (iv) Imazalil at 80mg a.i. per kg seed and flutriafol at 80mg a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section. No additional declarations are required.

Arabidopsis thaliana

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Anethum*".

GENERAL CONDITIONS:

For the approved plant species for which **NO** species specific import health standards have been developed, the following conditions apply:

Countries: All

Quarantine Pests: None

Entry Conditions: **Basic;** PLUS

1. Genetically modified seed

A permit to import is required. All genetically modified seed must also be imported in accordance with a HSNO approval.

2. Non-GM seed.

A permit to import is not required. All other seed must be accompanied by a supplier's declaration stating that the seed is not genetically modified. A declaration form is available on the following page of this schedule.

Ministry of Agriculture and Forestry
Te Manatu Ahuwhenua, Ngaherehere

DECLARATION FOR NON-GENETICALLY MODIFIED ORGANISMS

I……..……. declare that pursuant to the requirements set out in the Seed for Sowing Import Health Standard, that the *Arabidopsis thaliana* seeds being imported are not genetically modified organisms.

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

Signed by (print name):

Company Name and Details (if appropriate):

Signature:

Date:

Warning: Any person 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 a fine not exceeding $500,000.00.

Avena

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Avena*".

Entry conditions for *Avena* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Avena
Refer to "Pest List for *Avena*".

(ii) *Approved exporting 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.

(iii) *Documentation*
A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Avena* seeds for sowing exported to New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Avena* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including the regulated insects and mites on MAF's "Pest List for *Avena*" and seeds of regulated weed species.

AND

- sourced from a "Pest free area" or "Pest free place of production", free from *Xanthomonas campestris* pv. *Undulosa* and *High plains virus*.

AND

- sourced from a "Pest free area" or "Pest free place of production", free from *Anguina tritici*, or inspected microscopically for *Anguina tritici* in accordance with appropriate official procedures .

AND

EITHER

- sourced from a "Pest free area" free from *Cephalosporium gramineum*.

OR

- treated with one of the fungicide combinations described in MAF's "Approved Treatments for *Avena*".

(v) *Additional declarations to the phytosanitary certificate*

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section (if applicable), and by providing the following additional declaration to the phytosanitary certificate:

"The *Avena* seeds for sowing in this consignment have been:

- sourced from a "Pest free area", free from *Xanthomonas campestris* pv. *undulosa*, *High plains virus* and/or a "Pest free place of production", free from *Xanthomonas campestris* pv. *Undulosa* and *High plains virus*.

AND

- sourced from a "Pest free area" or "Pest free place of production", free from *Anguina tritici*, or inspected microscopically for *Anguina tritici* [choose ONE option] .

AND

- [if appropriate] sourced from a "Pest free area", free from *Cephalosporium gramineum*."

Pest List for *Avena*

REGULATED PESTS (actionable)

Insect	
Insecta	
Blattodea	
Blattidae	
Blatta orientalis	Oriental cockroach
Coleoptera	
Bostrichidae	
Prostephanus truncatus	larger grain borer
Cryptophagidae	
Cryptophagus schmidti	-
Cucujidae	
Cathartus quadricollis	squarenecked grain beetle
Curculionidae	
Caulophilus oryzae	broadnosed grain weevil
Dermestidae	
Trogoderma granarium	khapra beetle
Trogoderma inclusum	trogoderma beetle
Trogoderma ornatum	trogoderma beetle
Trogoderma simplex	dermestid beetle
Trogoderma sternale	dermestid beetle
Trogoderma variabile	warehouse beetle
Mycetophagidae	
Mycetophagus quadriguttatus	spotted hairy fungus beetle
Nitidulidae	
Carpophilus obsoletus	dried fruit beetle
Ptinidae	
Gibbium psylloides	shiny spider beetle
Mezium americanum	American spider beetle
Niptus hololeucus	golden spider beetle
Pseudoeurostus hilleri	spider beetle
Ptinus clavipes	brown spider beetle
Ptinus fur	whitemarked spider beetle
Ptinus villiger	hairy spider beetle
Tipnus unicolor	spider beetle
Trigonogenius globulus	-
Tenebrionidae	
Alphitobius laevigatus	black fungus beetle
Alphitophagus bifasciatus	two-banded fungus beetle
Blaps mucronata	cellar beetle
Gnatocerus maxillosus	slenderhorned flour beetle
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
Trogossitidae	
Lophocateres pusillus	Siamese grain beetle
Hemiptera	
Lygaeidae	
Elasmolomus sordidus	seed bugs
Lepidoptera	
Cosmopterigidae	
Pyroderces rileyi	pink scavenger caterpillar
Oecophoridae	
Anchonoma xeraula	grain moth
Pyralidae	
Corcyra cephalonica	rice moth
Ephestia figulilella	raisin moth
Paralipsa gularis	stored nut moth
Tineidae	
Nemapogon variatella	corn moth
Mite	
Arachnida	
Acarina	
Eriophyidae	
Aceria tosichella	wheat curl mite
Aceria tulipae [vector]	wheat curl mite
Siteroptidae	
Siteroptes cerealium	asparagus spider mite
Tarsonemidae	
Steneotarsonemus spirifex	oat spiral mite
Nematode	
Secernentea	
Tylenchida	
Anguinidae	
Anguina tritici [vector]	seed gall nematode
Fungus	
Hyphomycetales	
Moniliaceae	
Cephalosporium gramineum	
Bacterium	
Pseudomonadaceae	
Xanthomonas campestris pv. *undulosa*	leaf streak

Virus

High plains virus -

Approved Treatments for *Avena*

Fungicides

One of the following treatments is required:

i) Carboxin at 0.8 g a.i. per kg of seed and Thiram at 0.8 g a.i. per k.g of seed.

ii) Flutriafol at 0.05 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per kg of seed.

iii) Triadimenol at 0.23 g a.i. per kg of seed, Imazalil 0.075 g per kg of seed and Fuberidazole 0.15g a.i per kg of seed.

iv) Tebuconazole at 0.025 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per kg of seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Beta*".

1. Entry conditions for *Beta* seeds for sowing from approved exporting countries

(i) *Pests of* Beta
Clavibacter michiganensis subsp. *sepedonicus*.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the national plant protection organisation (NPPO) of the exporting country must accompany all consignments of *Beta* seeds for sowing imported into New Zealand.

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

The *Beta* seeds for sowing have been:

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

AND

- sourced from a "Pest free area", free from *Clavibacter michiganensis* subsp. *sepedonicus*.

OR

- A representative sample of 3200 seeds, drawn from this consignment according to the International Seed Testing Association's methodology, has been tested for *Clavibacter michiganensis* pv. s*epedonicus*.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Beta* seeds for sowing in this consignment have been:

- sourced from a "Pest free area", free from *Clavibacter michiganensis* subsp. *sepedonicus.*

OR

- *Clavibacter michiganensis* pv. *sepedonicus* was not detected in a representative sample of 3200 seeds drawn from this consignment.

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Brassica napus*".

1. Species-specific entry conditions for *Brassica napus* seeds for sowing from approved exporting countries

(i) *Pests of* Brassica napus

None

(ii) *Approved exporting countries*

All countries

(iii) *Documentation*

Phytosanitary certificate: a completed phytosanitary certificate issued by the national plant protection organisation (NPPO) of the exporting country must accompany all consignments of *Brassica napus* seeds for sowing exported to New Zealand. For positive identification of the imported consignment, 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). Importers of consignments of *Brassica napus* that are not identified appropriately will be offered the options of re-shipment, destruction or tested for the presence of unapproved GM seeds, see section (vi).

Genetically modified seed test certificate: The New Zealand Ministry of Agriculture and Forestry requires that all consignments of *Brassica napus* var. *oleifera* (oilseed rape) that are imported into New Zealand are tested for the presence of unapproved genetically modified seeds, see section (vi).

Import permit: an import permit is only required for seeds that must be grown in a registered quarantine facility as described in section (vi) and 4.

(iv) *Phytosanitary requirements*

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

The *Brassica napus* seeds for sowing have been:

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

(v) *Additional declarations to the phytosanitary certificate*

No additional declarations are required.

(vi) *Sampling and testing* Brassica napus *var*. oleifera *seed consignments for adventitious presence of unapproved genetically modified seeds*

The New Zealand Ministry of Agriculture and Forestry (MAF) requires that all consignments of *Brassica napus* var. *oleifera* (oilseed rape) that are imported into New Zealand are representatively sampled, tested, and found to be free of unapproved GM seeds. Alternatively, the seeds must be sourced from companies with MAF approved quality assurance systems which demonstrate equivalence with PCR testing every consignment of GM *Brassica napus var. oleifera*. 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. Complete guidelines for

sampling and testing for the presence of GM seeds are specified in the *Protocol for Testing Seed Imports for the Presence of Genetically Modified Seed*. The protocol includes three further options for importers of small volumes of seed (defined as less than 100g for *Brassica napus var. oleifera*) for cultivar trials and multiplication.

Testing may be conducted by facilities approved by MAF under the requirements specified in the Standard "*Approval of Facilities for Genetically Modified Organism Testing"*. If testing is conducted offshore, a copy of the completed test certificate (from a MAF-approved facility) must accompany the consignment imported into New Zealand. MAF will examine the test certificates on arrival to confirm that they reconcile with the actual consignment. Importers must ensure that MAF has access to all pertinent testing records held by MAF-approved testing facilities for audit purposes.

If consignments arrive at the New Zealand border without having been tested for the presence of unapproved GM seeds, MAF will offer the importer the options of re-shipping or destroying the consignment, or having the consignment sampled and tested as above at the importer's expense. Any consignment held at the New Zealand border that is tested and found to contain unapproved GM seeds will not be permitted to enter New Zealand and will be re-shipped or destroyed.

The protocol and a list of MAF-approved facilities for testing for the presence of GM material in *Brassica napus* var. *oleifera* are located at the following address on the MAF web site: http://www.biosecurity.govt.nz/regs/imports/plants/gmo

2. Validation of *Brassica napus* varieties (including all sub-species)

MAF reserves the right to undertake validation audits to confirm that the variety is that which is stated on the phytosanitary certificate accompanying the consignment. This may be done by growing a sample of the seed, or by auditing the crop *in situ*. Audits may be conducted on a random basis and if required, growth of samples will be conducted at MAF accredited facilities at the expense of the importer.

Camellia sinensis

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Camellia sinensis*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Exobasidium vexans;* Phloem necrosis

Entry Conditions: **Basic;** PLUS

1. A prior permit to import is required:

PEQ: Level 1
Minimum Period: 1 growing season
Isolation: 50 m

2. Phytosanitary Certificate Requirements:

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Camellia sinensis* seeds for sowing have been:

- sourced from a "Pest free area" free from *Exobasidium vexans* and phloem necrosis.

AND

- treated with one of the following fungicide combinations, either
  i) captan at 2g a.i. per kg seed; or
  ii)thiram at 2 g a.i. per kg seed.

3. Phytosanitary Certificate Additional Declarations:

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

(a) "*Exobasidium vexans* and phloem necrosis are not known to occur in _____ (the country or state where the seed was produced) _____".

Camissonia

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Camissonia*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Peronospora arthurii*

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Camissonia* seeds for sowing have been:

- treated with one of the following fungicide combinations, either
  i) captan at 2g a.i. per kg seed; or
  ii)thiram at 2 g a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section. No additional declarations required.

Cannabis sativa

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Cannabis sativa*".

Note: Importers of *Cannabis sativa* (low THC hemp seed) must contact the Ministry of Health prior to importation for advice on licensing for low THC hemp seed.

Ministry of Health
P O Box 5013
Wellington
Attention: Advisor, Controlled Drug Licensing
Telephone: 04 496 2000

Entry conditions for *Cannabis sativa* (low THC Hemp seed variety) seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Cannabis sativa
Refer to "Pest List for *Cannabis sativa*".

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Cannabis sativa* seeds for sowing exported into New Zealand.
(iv) *Phytosanitary certification*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Cannabis sativa* seeds for sowing have been:
- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests and regulated weed species, including the regulated insects and mites on MAF's "Pest List for *Cannabis sativa*".

AND EITHER
- sourced from a "Pest free area" or "Pest free place of production", free from the named regulated bacteria (*Pseudomonas syringae* pv. *cannabina and Xanthomonas campestris* pv. *cannabis).*
  OR
- treated with the hot water treatment as described in MAF's "Approved Treatments for *Cannabis sativa*";

AND EITHER
- sourced from a "Pest free area" free from the named regulated fungi (*Leptosphaeria woroninii, Septoria cannabis* and *Curvularia cymbopogonis*
  OR
- treated with one of the fungicide combinations described in MAF's "Approved Treatments

for *Cannabis sativa*";
AND EITHER
- sourced from a "Pest free area" or "Pest free place of production", free from the named regulated viruses (*Hemp mosaic virus* and *Hemp streak virus*).

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section (if applicable), and by providing the following additional declarations to the phytosanitary certificate:

"The *Cannabis sativa* seeds for sowing in this consignment have been:
- [if appropriate] sourced from a "Pest free area", free from _____ (name of the regulated bacteria) _____, and/or a "Pest free place of production", free from _____ (name of the regulated bacteria) _____.

AND
- [if appropriate] sourced from a "Pest free area", free from _____ (name of the regulated fungi) _____;

AND
- sourced from a "Pest free area", free from _____ (name of the regulated virus) _____, and/or a "Pest free place of production", free from _____ (name of the regulated virus) _____.

Approved Testing and Treatments for *Cannabis sativa*

Hot water treatment (for bacteria and parasitic weed) prior to shipment
The *Cannabis sativa* seeds must be treated using a hot water dip for the eradication of bacterial organisms (*Pseudomonas syringae* pv. *cannabina* and *Xanthomonas campestris* pv. *cannabis*). Hot water treatment must be conducted either at 50°C for 30 minutes or at 60°C for 10 minutes (Hemp Diseases and Pests: Management and Biological Control. J. M. McPartland, R. C. Clarke and D. P. Watson 2000. CAB International).

Note: 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 MAF-approved facility is currently available in New Zealand.

Fungicides
The *Cannabis sativa* seeds must be treated (in lieu of pest free area) with the active ingredients in one of the following treatments

(i) Carboxin at 0.8g a.i. per kg seed and thiram at 1g a.i. per kg seed.
(ii) Carboxin at 0.8g a.i. per kg seed and captan at 0.7g a.i. per kg seed.
(iii) Imazalil at 80mg a.i. per kg seed and triadimenol at 220mg a.i. per kg seed.
(iv) Imazalil at 80mg a.i. per kg seed and flutriafol at 80mg a.i. per kg seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Pest List for *Cannabis sativa* (Seed for Sowing)

Scientific name	Organism type	Common name	Quarantine status	Measures to prevent entry	Actions on interception
Pseudomonas syringae pv. *cannabina*	bacterium	-	**Regulated**	5 or 7 or 8	3
Xanthomonas campestris pv. *cannabis*	bacterium	-	**Regulated**	5 or 7 or 8	3
Curvularia cymbopogonis	fungus	-	**Regulated**	5 or 7	3
Leptosphaeria woroninii	fungus	-	**Regulated**	5 or 7	3
Septoria cannabis	fungus	yellow leaf spot	**Regulated**	5 or 7	3
Hemp mosaic virus	virus	-	**Regulated**	7 or 8	3
Hemp streak virus	virus	-	**Regulated**	7 or 8	3
Pyrrhocoris apterus	Insect	fire bug	**Regulated**	2	3
Episyrphus balteatus	Insect		**Regulated**	2	3
Ischiodon scutellaris	Insect	syrphid fly	**Regulated**	2	3
Metasyrphus latifasciatus	Insect	syrphid fly	**Regulated**	2	3
Sphaerophoria scripta	Insect	hover fly	**Regulated**	2	3
Syritta pipiens	Insect	hover fly	**Regulated**	2	3
Aculops cannabicola	mite	hemp russett mite	**Regulated**	2	3
Orobanche ramosa	Weed	branched broomrape	**Regulated**	2	3

Measures to prevent entry and establishment

1. No measures.
2. Seed and associated packaging inspected and found to be free from visually detectable regulated pests.
3. Consignments are free from extraneous material, e.g., soil, plant residue that may carry regulated pests.
4. Undergone effective treatment for regulated pests.
5. Undergone specified treatment for regulated pests.
6. Undergone specified testing for regulated pests.
7. Sourced from a pest free area.
8. Sourced from a pest free place of production.

Actions on interception

1. Removal of extraneous material, e.g., soil, plant residue that may carry regulated pests.
2. Treat (if appropriate), reship or destroy.
3. No action if pest not viable.

Carpinus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Carpinus*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Cladosporium caryigenum; Cryphonectria parasitica*

Entry Conditions: **Basic;** PLUS

1. A prior permit to import is required:

PEQ: Level 1
Minimum Period: 1 growing season
Isolation: 50 metres

2. Phytosanitary Certificate Requirements:

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Carpinus* seeds for sowing have been:

- sourced from a "Pest free area" free from *Cladosporium caryigenum* and *Cryphonectria parasitica.*

AND

- treated with one of the following fungicide combinations, either
  i) captan at 2g a.i. per kg seed; or
  ii)thiram at 2 g a.i. per kg seed.

3. Phytosanitary Certificate Additional Declarations:

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

"*Cladosporum caryigenum* and *Cryphonectria parasitica* are not known to occur in _____ (country or state where the seed was produced) _____".

Carthamus tinctorius

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Carthamus tinctorius*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Alternaria carthami; Cercospora carthami; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Carthamus tinctorius* seeds for sowing have been treated with Iprodione at 2.5g a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section. No additional declarations are required.

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Carya*".

GENERAL CONDITIONS:

Countries: Australia, USA

Quarantine Pests: *Cladosporium caryigenum; Conotrachelus* spp.; Curculiocaryae; *Cydia caryana*; *Trogoderma* spp.

Entry Conditions: **Basic**; PLUS

Phytosanitary Certificate Additional Declarations:

(a) "*Conotrachelus* spp., *Curculio caryae* and *Cydia caryana* are not known to attack *Carya* seed or nuts in ____ (the country or state where the seed was produced) ____".

OR

"The seed was fumigated with methyl bromide at _____ pressure for ____ hours at _____ g/m^3 at a temperature of _____ ^0C".

Note: The pressure/time/rate temperature combination used is to be in accordance with the following scale:

Temperature	Rate (g/m^3)	Time (hours)	Pressure
15 - 21°C	32	12	atmospheric
21°C or above	16	12	atmospheric
15 - 21°C	48	1.5	91 kpa vacuum
21°C or above	48	1.0	91 kpa vacuum

(b) "*Cladosporum caryigenum* is not known to occur in ____ (the country or state where the seed was produced) _____"

(c) "The seed has been treated with _____ (insert one of the options below) _____ at 2g a.i. per kg seed."

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

captan
thiram

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Carya ovata*".

GENERAL CONDITIONS:

Countries: Australia

Quarantine Pests: *Cladosporium caryigenum; Cryphonectria parasitica; Conotrachelus* spp.; *Curculio caryae; Cydia caryana; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

1. A prior permit to import is required:

PEQ: Level 1
Minimum Period: 1 growing season
Isolation: 50 m

2. Phytosanitary Certificate Additional Declarations:

(a) "*Cladosporum caryigenum* and *Cryphonectria parasitica* are not known to occur in _____ (the country or state where the seed was produced) _____".

(b) "*Conotrachelus* spp., *Curculio caryae* and *Cydia caryana* are not known to attack *Carya* seed or nuts in _____ (the country or state where the seed was produced) _____"

OR

"The seed was fumigated with methyl bromide at ___ pressure for ___ hours at ___ g/m^3 at a temperature of ___ ^{O}C".

Note: The pressure/time/rate temperature combination used is to be in accordance with the following scale:

(Continued next page)

Temperature	Rate (g/m^3)	Time (hours)	Pressure
15 - 21°C	32	12	atmospheric
21°C or above	16	12	atmospheric
15 - 21°C	48	1.5	91 kpa vacuum
21°C or above	48	1.0	91 kpa vacuum

(c) "The seed has been treated with _____ (insert one of the options below) _____ at 2g a.i. per kg seed".

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

captan
thiram

Castanea

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Castanea*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Ceratocystis fagacearum; Cryphonectria parasitica; Curculio* spp.; *Cyrtepistomus castaneus*

Entry Conditions: **Basic;** PLUS

A prior permit to import is required:

PEQ: Level 3
Minimum Period: 1 growing season

Cicer

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Cicer*".

1. Entry conditions for *Cicer* seeds for sowing from approved exporting countries:

(i) *Pests of* Cicer
Ascochyta rabiei; Megaselia arietina; Trogoderma spp.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the national plant protection organisation (NPPO) of the exporting country must accompany all consignments of *Cicer* seeds for sowing imported into New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by the MAF have been undertaken.
The *Cicer* seeds for sowing have:
– been sourced from a "Pest free area" or "Pest free place of production".

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

"The *Cicer* seeds for sowing in this consignment have:
– been sourced from a "Pest free area" or "Pest free place of production", free from *Ascochyta rabiei*.

Citrus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Citrus*".

GENERAL CONDITIONS:

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

Quarantine Pests: *Xanthomonas campestris* pv. *citri*

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declaration:

"*Xanthomonas campestris* pv. *citri* is not known to occur in _____ (the country or state where the seed was produced) _____".

Cocos

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Cocos*".

1. Entry conditions for *Cocos* seeds for sowing from approved exporting countries

(i) *Pests of* Cocos
Coconut cadang-cadang viroid

Note: Seed covered in a fleshy pericarp will not be permitted entry into New Zealand.

(ii) *Approved exporting countries*
All countries except Guam, the Philippines and the Solomon Islands.

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Cocos* seeds for sowing imported into New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by the MAF.
The *Cocos* seeds for sowing have:

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

AND

– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

AND

– been produced in a "Pest free area", free from *Coconut cadang-cadang viroid*.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Cocos* seeds for sowing in this consignment have:

- been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

AND

– been sourced from a "Pest free area", free from *Coconut cadang-cadang viroid*.

Coffea

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Coffea*".

GENERAL CONDITIONS:

Countries: Australia, Cook Islands, Hawaii, Samoa, Tonga

Quarantine Pests: *Stephanoderes hampei*

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Coffea* seeds for sowing have been:

- treated with one of the following fungicide combinations, either
  i) captan at 2g a.i. per kg seed; or
  ii)thiram at 2 g a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section. No additional declarations required.

Coriandrum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Coriandrum*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Ramularia coriandri; Trogoderma* spp

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Coriandrum* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Ramularia coriandri*

AND

- treated with one of the following fungicide combinations, either
  - i) Benomyl at 2.5 g a.i. per kg seed
  - (ii) Carbendazim at 2.5 g a.i. per kg seed
  - (iii) Thiophanate methyl at 2.5 a.i. per kg seed

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

> "*Ramularia coriandri* is not known to occur in _____ (the country or state where the seed was produced) _____".
>
> **OR**
>
> "The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Ramularia coriandri* was detected".

Corylus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Corylus*".

1. Species-specific entry conditions for *Corylus* seeds for sowing from approved exporting countries

(i) *Pests of* Corylus
Cydia latiferreana, Curculio nucum

(ii) *Approved exporting countries*
All countries

There are no specific entry conditions for *Corylus* seeds for sowing aside from the requirement that all *Corylus* seeds imported into New Zealand must have their shells removed to permit inspection prior to entry.

Corypha

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Corypha*".

1. Entry conditions for *Corypha* seeds for sowing from approved exporting countries

(i) *Pests of* Corypha
Coconut cadang-cadang viroid

Note: Seed covered in a fleshy pericarp will not be permitted entry into New Zealand.

(ii) *Approved exporting countries*
All countries except Guam, the Philippines and the Solomon Islands.

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the national plant protection organisation (NPPO) of the exporting country must accompany all consignments of *Corypha* seeds for sowing imported into New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by the MAF have been undertaken.
The *Corypha* seeds for sowing have:

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

AND

– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

AND

– been produced in a "Pest free area", free from *Coconut cadang-cadang viroid*.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Corypha* seeds for sowing in this consignment have:

– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

AND

– been sourced from a "Pest free area", free from *Coconut cadang-cadang viroid*.

Cucurbita pepo

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Cucurbita pepo*".

1. Species-specific entry conditions for *Cucurbita pepo* seeds for sowing from approved exporting countries

(i) *Pests of* Cucurbita pepo
None

(ii) *Approved exporting countries*
All countries

There are no specific entry conditions for *Cucurbita pepo* seeds for sowing except for the following genetically modified varieties which are prohibited entry to New Zealand without HSNO approval:

Yellow crook neck squash variety ZW20 and CZW3
Yellow crook neck squash variety "Revenue" and "Tigress"
Yellow crook neck squash variety Destiny III and Prelude II

(iii) *Documentation:*
Documentation accompanying imports should declare that the consignment does not contain seeds of the above prohibited varieties.

The required declaration may be contained on either:

- an importer's declaration, or
- an exporter's declaration.

Cuminum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Cuminum*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Alternaria burnsii*

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Cuminum* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Alternaria burnsii*

AND

- treated with Iprodione at 2.5g a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

> "*Alternaria burnsii* is not known to occur in _____ (the country or state where the seed was produced) _____".
>
> **OR**
>
> "The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Alternaria burnsii* was detected".

Desmodium

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Desmodium*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: Desmodium mosaic virus*; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declaration:

"Desmodium mosaic virus is not known to occur in _____ (the country or state where the seed was produced) _____".

OR

"The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no Desmodium mosaic virus was detected".

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Echinochloa*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Sclerospora graminicola; Trogoderma* spp.; Ustilaginales

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Echinochloa* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Sclerospora graminicola*

AND

- treated with one of the following fungicide combinations, either
  - i) Carboxin at 0.8g a.i. per kg seed and thiram at 1g a.i. per kg seed.
  - (ii) Carboxin at 0.8g a.i. per kg seed and captan at 0.7g a.i. per kg seed.
  - (iii) Imazalil at 80mg a.i. per kg seed and triadimenol at 220mg a.i. per kg seed.
  - (iv) Imazalil at 80mg a.i. per kg seed and flutriafol at 80mg a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

> "*Sclerospora graminicola* is not known to occur in _____ (the country or state where the seed was produced) _____".
>
> **OR**
>
> "The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Sclerospora graminicola* was detected".

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Elaeis*".

1. Entry conditions for *Elaeis* seeds for sowing from approved exporting countries

(i) *Pests of* Elaeis
Coconut cadang-cadang viroid

Note: Seed covered in a fleshy pericarp will not be permitted entry into New Zealand.

(ii) *Approved exporting countries*
All countries except Guam, the Philippines and the Solomon Islands.

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Elaeis* seeds for sowing imported into New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by the MAF have been undertaken.
The *Elaeis* seeds for sowing have:

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

AND

– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

AND

– been produced in a "Pest free area", free from *Coconut cadang-cadang viroid.*

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Elaeis* seeds for sowing in this consignment have:

- been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

AND

– been sourced from a "Pest free area", free from *Coconut cadang-cadang viroid.*

Eriobotrya

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Eriobotrya*".

GENERAL CONDITIONS:

Countries: All

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

Entry Conditions: **Basic;** PLUS

OPTION 1

1. A prior permit to import is required:

2. Phytosanitary Certificate Additional Declaration:

"*Pseudomonas syringae* pv. *eriobotryae* is not known to occur in _____ (the country or state where the seed was produced) _____".

OPTION 2

PEQ: Level 3
Minimum Period: 2 growing seasons

Fagus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Fagus*".

GENERAL CONDITIONS:

For the approved plant species for which **NO** species specific import health standards have been developed, the following conditions apply:

Countries: All

Quarantine Pests: Tortricidae

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declaration:

"The seed has been treated with _____ (insert one of the options below) _____ at 2g a.i. per kg seed."

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

captan
thiram

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Fragaria*".

Entry conditions for *Fragaria* seeds from approved countries
These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Fragaria
Refer to the pest list.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Ribes* seed for sowing imported into New Zealand.
Import permit: an import permit is required.

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

The *Fragaria* seeds for sowing have been:
- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

(v) *Additional declarations to the phytosanitary certificate*
No additional declarations are required.

(vi) *Post-entry quarantine*
PEQ: All *Fragaria* seeds must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator*.
Quarantine Period: The seed will be grown for a minimum period of 6 months and will be inspected and/or tested for regulated pests at the expense of the importer. Six months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

Pest List for *Fragaria*

REGULATED PESTS (actionable)

Viruses

Fragaria chiloensis latent virus
Raspberry ringspot virus
Strawberry latent ringspot virus (Strains not in New Zealand)
Tobacco streak virus
Tomato black ring virus
Tomato ringspot virus (Strains not in New Zealand)

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

Inspection, Testing and Treatment Requirements for *Fragaria*

ORGANISM TYPES	**NZ MAF ACCEPTABLE METHODS** (See notes below)
Virus	
Fragaria chiloensis latent virus	Herbaceous indexing with Cq
Raspberry ringspot virus	ELISA or PCR and herbaceous indexing with Cq
Strawberry latent ringspot virus	ELISA or PCR and herbaceous indexing with Cq
Tobacco streak virus	ELISA or PCR and herbaceous indexing with Cq
Tomato black ring virus	ELISA and herbaceous indexing with Cq
Tomato ringspot virus	ELISA or PCR and herbaceous indexing with Cq

Key Cq – Chenopodium quinoa
ELISA - Enzyme linked immunosorbent assay
PCR - Polymerase chain reaction

Notes:

1. Tests are to be carried out on plants germinated from the imported seeds.

2. The unit for testing is an individual seedling unless evidence is supplied by the exporting NPPO that seeds have been derived from the same mother plant. Bulking of up to 5 seedlings derived from the same mother plant, for ELISA or PCR testing, is acceptable. Samples must be tested individually by herbaceous indexing.

3. Testing must be carried out on plants while they are in active growth.

4. Indicator plants must be grown under appropriate temperatures.

5. Indicator plants must be shaded for 12-24 hrs prior to inoculation.

6. For each *Fragaria* plant, at least two young fully-expanded leaves must be sampled from the apical crown region.

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. 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 *Fragaria* plants by the operator of the PEQ facility for signs of pest and disease must be at least once per week.

13. Other internationally recognised testing methods may be accepted by MAF with prior notification.

References

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Hanada, K. and Harrison, BD. (1977). Effects of virus genotype and temperature on seed transmission of nepoviruses. *Ann. appl. Biol*. 85: 79-92

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http://www.ncbi.nlm.nih.gov/ICTVdb/ICTVdB/

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MAF Biosecurity New Zealand Post-Entry Quarantine Testing Manual *Fragaria*
http://www.biosecurity.govt.nz/files/regs/imports/plants/high-value-crops/peq-fragaria-testing.pdf

Murant A.F. (1983) Seed and Pollen Transmission of nematode-borne viruses. *Seed Science and Technology*, 11:973-987

Spiegel, S., Martin, R.R., Leggett, F., ter Borg, M. and Postman, J. (1993) Characterization and geographical distribution of a new ilarvirus from Fragaria chiloensis. *Phytopathology* 83: 991-995

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Glycine*".

1. Entry conditions for *Glycine* seeds for sowing from approved exporting countries

(i) *Pests of* Glycine
Peronospora manshurica; *Trogoderma* spp.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the national plant protection organisation (NPPO) of the exporting country must accompany all consignments of *Glycine* seeds for sowing that are imported into New Zealand.
Genetically modified seed test certificate: MAF requires that all consignments of *Glycine max* (soybean) that are imported into New Zealand are tested for the presence of unapproved genetically modified seeds (see (vi) in this schedule).
Import permit: an import permit is required only for consignments of seeds that must undergo post-entry quarantine as described in section 4 of this schedule "Seed imported under permit into post-entry quarantine". The permit should be obtained prior to the seed arriving at the New Zealand border.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Glycine* seeds for sowing have been :

– inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including *Trogoderma* spp.

AND

– sourced from a "Pest free area" or "Pest free place of production", free from *Peronospora manshurica*.

AND

– treated against *Peronospora manshurica* using one of the following fungicide combinations, either
  i) metalaxyl at 0.7 g a.i. per kg seed and captan at 0.7 g a.i. per kg seed; or
  ii) metalaxyl at 0.7 g a.i. per kg seed and thiram at 1 g a.i. per kg seed.
  With prior approval, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section and must confirm this by providing the following additional declarations to the phytosanitary certificate:

"The *Glycine* seeds for sowing in this consignment have been:

– inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including *Trogoderma* spp.

AND

– sourced from a "Pest free area" or "Pest free place of production", free from *Peronospora manshurica*.

(vi) *Sampling and testing* Glycine max *seed consignments for adventitious presence of unapproved genetically modified seeds.*

MAF requires all consignments of *Glycine max* (soybean) imported into New Zealand to be representatively sampled, tested, and found to be free of unapproved GM seeds. Alternatively, the seeds must be sourced from companies with MAF approved quality assurance systems which demonstrate equivalence with PCR testing every consignment of GM *Glycine max*. 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. Complete guidelines for sampling and testing for the presence of GM seeds are specified in the *Protocol for Testing Seed Imports for the Presence of Genetically Modified Seed*. The protocol includes three further options for importers of small volumes of seed (defined as less than 5kg for *Glycine max*) for cultivar trials and multiplication.

Testing may be conducted by facilities approved by MAF under the requirements specified in the Standard "*Approval of Facilities for Genetically Modified Organism Testing*". If testing is conducted offshore, a copy of the completed test certificate (from a MAF-approved facility) must accompany the consignment imported into New Zealand. MAF will examine the test certificates on arrival to confirm that they reconcile with the actual consignment. Importers must ensure that MAF has access to all pertinent testing records held by MAF-approved testing facilities for audit purposes.

If consignments arrive at the New Zealand border without having been tested for the presence of unapproved GM seeds, MAF will offer the importer the options of re-shipping or destroying the consignment, or having the consignment sampled and tested as above at the importer's expense. Any consignment held at the New Zealand border that is tested and found to contain unapproved GM seeds will not be permitted to enter New Zealand and will be re-shipped or destroyed.

The protocol and a list of MAF-approved facilities for testing for the presence of GM material in *Glycine max* are located at the following address on the MAF web site:
http://www.biosecurity.govt.nz/regs/imports/plants/gmo

Seed imported under permit into post-entry quarantine

If a phytosanitary certificate with the required additional declarations can not be obtained, *Glycine* seed may be imported under permit into post-entry quarantine in a transitional facility accredited to MAF standard PBC-NZ-TRA-PQCON: *Specification for the Registration of a*

Plant Quarantine or Containment Facility, and Operator. The seed will be grown for a minimum period of one growing season and will be tested or inspected for regulated pests at the expense of the importer. Such seed must be accompanied by an import permit directing the seed from the border to the transitional facility. The permit should be obtained prior to the seed arriving at the New Zealand border.

Gossypium

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Gossypium*".

GENERAL CONDITIONS:

Countries: Australia

Quarantine Pests: *Anthonomus grandis; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary certificate: a completed phytosanitary certificate issued by the national plant protection organisation of the exporting country must accompany all consignments of *Gossypium* seeds for sowing exported to New Zealand. The phytosanitary certificate must include the following additional declaration:

"The seed has been cleaned and is completely free of lint".

Import permit: an import permit is required for all consignments of *Gossypium hirsutum* seeds for sowing exported to New Zealand. The permit should be obtained prior to the seed arriving at the New Zealand border (see section 1.4). When applying for an import permit, the importer will be required to provide appropriate assurances that the consignment to be imported does not contain unauthorised genetically modified seeds. Appropriate assurances include testing the consignment, or testing the parent plants and isolating the crop during production. The New Zealand Ministry of Agriculture and Forestry will develop a specific testing protocol for *Gossypium hirsutum* seeds for sowing if a significant number of consignments are exported to New Zealand.

Helianthus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Helianthus*".

GENERAL CONDITIONS:

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

Quarantine Pests: *Alternaria helianthi; Lasioptera murtfeldtiana; Plasmopara halstedii; Septoria helianthi;* Sunflower mosaic virus; *Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declarations:

(a) "*Alternaria helianthi, Lasioptera murtfeldtiana, Plasmopara halstedii, Septoria helianthi,* and Sunflower mosaic virus are not known to occur in _____ (the country or state where the seed was produced) _____".

OR

"The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Alternaria helianthi, Lasioptera murtfeldtiana, Plasmopara halstedii, Septoria helianthi* or Sunflower mosaic virus was detected".

OR

(i) "The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Lasioptera murtfeldtiana, Plasmopara halstedii* or Sunflower mosaic virus was detected".

(ii) "No evidence of contamination with *Alternaria helianthi* or *Septoria helianthii* was found in 600 pure seeds drawn and tested in accordance with the general directions for seed health testing in the current International Rules for Seed Testing".

(Continued next page)

(b) "The seed has been treated with _____ (insert one of the options below) _____".

Note: One of the following fungicide combinations is to be used:

(i) Metalaxyl at 0.7g a.i. per kg seed and captan at 0.7g a.i. per kg seed.

(ii) Metalaxyl at 0.7g a.i. per kg seed and thiram at 1g a.i. per kg seed.

Hordeum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Hordeum*".

Entry conditions for *Hordeum* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Hordeum
Refer to "Pest List for *Hordeum*".

(ii) *Approved exporting 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.

(iii) *Documentation*
A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Hordeum* seeds for sowing exported to New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Hordeum* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including the regulated insects and mites on MAF's "Pest List for *Hordeum*" and seeds of regulated weed species.

AND

- sourced from a "Pest free area" or "Pest free place of production", free from the named regulated bacteria (*Pseudomonas syringae* pv. *striafaciens, Rathayibacter tritici, Xanthomonas campestris* pv. *undulosa*) and viruses (*Barley mosaic virus, High plains virus*).

AND

EITHER

- sourced from a "Pest free area" free from the named regulated fungi (*Cephalosporium gramineum, Fusarium longipes*).

OR

- treated with one of the fungicide combinations described in MAF's "Approved Treatments for *Hordeum*";

AND

EITHER

- sourced from a "Pest free area" free from *Tilletia controversa*

OR

- sourced from a "Pest free place of production", free from *Tilletia controversa*, **AND treated** with one of the fungicide combinations described in MAF's "Approved Treatments for *Hordeum*".

OR

- a representative sample of 600 seeds, drawn from this consignment according to the International Seed Testing Association's methodology, has been tested for *Tilletia*

controversa, **AND treated** with one of the fungicide combinations described in MAF's "Approved Treatments for *Hordeum*".

(v) *Additional declarations to the phytosanitary certificate*

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section (if applicable), and by providing the following additional declaration to the phytosanitary certificate:

"The *Hordeum* seeds for sowing in this consignment have been:

- sourced from a "Pest free area", free from _____ (name of the above regulated bacteria and viruses) _____, and/or a "Pest free place of production", free from _____ (name of the above regulated bacteria and viruses) _____.

AND

- sourced from a "Pest free area", free from _____ (name of the above regulated fungi) _____;

AND

EITHER [choose ONE option]

- sourced from a "Pest free area", free from *Tilletia controversa*,

OR

- sourced from a "Pest free place of production", free from *Tilletia controversa*,

OR

- No spores of *Tilletia controversa* were found in a representative sample of 600 seeds drawn from this consignment."

Approved Treatments for *Hordeum*

Fungicides

One of the following treatments is required:

i) Carboxin at 0.8 g a.i. per kg of seed and Thiram at 0.8 g a.i. per k.g of seed.

ii) Carboxin at 0.8 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per k.g of seed.

iii) Flutriafol at 0.05 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per kg of seed.

iv) Triadimenol at 0.23 g a.i. per kg of seed, Imazalil 0.075 g per kg of seed and Fuberidazole 0.15g a.i per kg of seed.

v) Tebuconazole at 0.025 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per kg of seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

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	
Tilletia controversa	dwarf bunt

mitosporic fungi (Hyphomycetes)	
Hyphomycetales	
Moniliaceae	
Cephalosporium gramineum	stripe
Tuberculariales	
Tuberculariaceae	
Fusarium longipes	fusarium head blight
Bacterium	
Corynebacteriaceae	
Rathayibacter tritici	yellow ear rot
Pseudomonadaceae	
Pseudomonas syringae pv. *striafaciens*	bacterial stripe blight
Xanthomonas campestris pv. *undulosa*	leaf streak
Virus	
Barley mosaic virus	-
High plains virus	-

Humulus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Humulus lupulus*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Pseudoperonospora humuli; Verticillium albo-atrum*

Entry Conditions: **Basic;** PLUS

A prior permit to import is required:

PEQ: Level 3
Minimum Period: 1 growing season

Juglans

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Juglans*".

GENERAL CONDITIONS:

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

Quarantine Pests: *Gnomonia leptostyla*; Pyralidae; Tortricidae; *Trogoderma* spp; Cherry leaf roll virus

Entry Conditions: **Basic;** PLUS

A prior permit to import is required:

PEQ: Level 1
Minimum Period: 2 growing seasons
Isolation: 50m

Phytosanitary Certificate Additional Declarations:

(a) "*Gnomonia leptostyla* and Cherry leaf roll virus are not known to occur in _____ (the country or state where the seed was produced) _____".

OR

"The seed is from trees that have been inspected during the growing season according to appropriate procedures and no *Gnomonia leptostyla* or Cherry leaf roll virus was detected".

(b) "The seed was fumigated with methyl bromide at ___ pressure for ___ hours at ___ g/m^3 at a temperature of ___ ^{O}C".

Note: The pressure/time/rate temperature combination used is to be in accordance with the following scale:

(Continued next page)

Juglans

Temperature	Rate (g/m^3)	Time (hours)	Pressure
15 - 21°C	32	12	Atmospheric
21°C or above	16	12	Atmospheric
15 - 21°C	48	1.5	91 kpa vacuum
21°C or above	48	1.0	91 kpa vacuum

Lablab

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Lablab*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Earias vitella; Maruca testulalis; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

For seed In pods:

Phytosanitary Certificate Additional Declaration:

"The pods were inspected before export and no caterpillars of *Earias vitella* or *Maruca testulalis* were found in a 600 unit sample".

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Lavandula*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Coniothyrium lavandulae; Phoma lavandulae*

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Lavandula* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Coniothyrium lavandulae and Phoma lavandulae*

AND

- treated with one of the following fungicide combinations, either
  - i) Benomyl at 2.5 g a.i. per kg seed
  - (ii) Carbendazim at 2.5 g a.i. per kg seed
  - (iii) Thiophanate methyl at 2.5 a.i. per kg seed

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

> "*Coniothyrium lavandulae* and *Phoma lavandulae* are not known to occur in _____ (the country or state where the seed was produced) _____".
>
> **OR**
>
> "The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Coniothyrium lavandulae* or *Phoma lavandulae* was detected".

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Lens*".

1. Entry conditions for *Lens* seeds for sowing from approved exporting countries

(i) *Pests of* Lens
Trogoderma granarium.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Lens* seeds for sowing imported into New Zealand.

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

The *Lens* seeds for sowing have been:

– inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including *Trogoderma granarium.*

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Lens* seeds for sowing in this consignment have:

– inspected in accordance with appropriate official procedures and found to be free of *Trogoderma granarium*.

Linum usitatissimum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under "Linum usitatissimum".

1. Species-specific entry conditions for *Linum usitatissimum* seeds for sowing from approved exporting countries

(i) *Pests of* Linum usitatissimum
None

(ii) *Approved exporting countries*
All countries

There are no specific entry conditions for *Linum usitatissimum* seeds for sowing except for the following genetically modified variety which is prohibited entry to New Zealand without HSNO approval:

Linum usitatissimum var. FP967 (CDC Triffid)

(iii) *Documentation:*
Importers should declare that the consignment is not known to contain seeds of the above prohibited variety.

A declaration form is available on the following page of this schedule.

Ministry of Agriculture and Forestry
Te Manatu Ahuwhenua, Ngaherehere

DECLARATION FOR NON-GENETICALLY MODIFIED ORGANISMS

I……..……. declare that pursuant to the requirements set out in the Seed for Sowing Import Health Standard, that the *Linum usitatissimum* seeds for sowing being imported are not known to contain genetically modified organisms.

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

Signed by (print name):

Company Name and Details (if appropriate):

Signature:

Date:

Warning: Any person 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 a fine not exceeding $500,000.00.

Lithocarpus densiflorus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Lithocarpus densiflorus*".

GENERAL CONDITIONS:

For the approved plant species for which **NO** species specific import health standards have been developed, the following conditions apply:

Countries: Australia, Canada, Germany, India, Israel, Japan, Mexico, Tunisia, UK, USA

Quarantine Pests: *Ceratocystis fagacearum;* Tortricidae

Entry Conditions: **Basic;** PLUS

1. A prior permit to import is required:

PEQ: Level 1
Minimum Period: 1 growing season
Isolation: 50 m

2. Phytosanitary Certificate Additional Declarations:

"*Ceratocystis fagacearum* is not known to occur in _____ (the country or state where the seed was produced) _____".

OR

(i) "Seed has been collected from trees that have been officially inspected for disease caused by *Ceratocystis fagacearum* and no disease was detected".

(ii) "The seed has been treated with _____ (insert one of the options below) _____ at 2g a.i. per kg seed."

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

captan
thiram

Livistona

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Livistona* ".

1. Entry conditions for *Livistona* seeds for sowing from approved exporting countries

(i) *Pests of* Livistona
Coconut cadang-cadang viroid

Note: Seed covered in a fleshy pericarp will not be permitted entry into New Zealand.

(ii) *Approved exporting countries*
All countries except Guam, the Philippines and the Solomon Islands.

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Livistona* seeds for sowing imported into New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by the MAF have been undertaken.
The *Livistona* seeds for sowing have:

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

AND

– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

AND

– been produced in a "Pest free area", free from *Coconut cadang-cadang viroid*.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Livistona* seeds for sowing in this consignment have:

– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

AND

– been sourced from a "Pest free area", free from *Coconut cadang-cadang viroid*.

Lophophora williamsii

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.06 under *Lophophora williamsii*".

GENERAL CONDITIONS:

Countries: All

Entry Conditions: **Basic;** PLUS:

Import permit and licence: an import permit and a licence to import controlled drugs are both required. Before applying for an import permit from the Ministry of Agriculture and Forestry, the importer must obtain a licence to import controlled drugs from:

Director General of Health
Ministry of Health
P O Box 5013
Wellington
Attention: Advisor, Controlled Drug Licensing

Telephone: 04 496 2438

Lotus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Lotus*”.

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Cercospora loti; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declaration:

"*Cercospora loti* is not known to occur in _____ (the country or state where the seed was produced) _____".

OR

"The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Cercospora loti* was detected".

Macadamia

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Macadamia*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Cryptophlebia ombrodelta; Deudorix epijarbos; Dichocrocis punctiferalis; Isotenes miserana*

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declaration:

"The seed was fumigated with methyl bromide at ___ pressure for ___ hours at ___ g/m^3 at a temperature of ___ ^{O}C".

Note: The pressure/time/rate temperature combination used is to be in accordance with the following scale:

Temperature	Rate (g/m^3)	Time (hours)	Pressure
15 - 21^{o}C	32	12	atmospheric
21^{o}C or above	16	12	atmospheric
15 - 21^{o}C	48	1.5	91 kpa vacuum
21^{o}C or above	48	1.0	91 kpa vacuum

Malus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Malus*".

1. Entry conditions for *Malus* seeds for sowing from approved exporting countries

(i) *Pests of* Malus
Apple scar skin viroid; *Monilinia fructigena*; *Sowbane mosaic virus*; *Tomato bushy stunt virus*.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Malus* seeds for sowing imported into New Zealand.
Import permit: an import permit must be obtained from the MAF prior to the *Malus* seeds arriving at the New Zealand border.

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

The *Malus* seeds for sowing have been

– inspected in accordance with appropriate official procedures and found to be free of the regulated pests (regulated weed species) specified by MAF.

(v) *Post-entry quarantine requirements*
All *Malus* seeds must be imported under permit into post-entry quarantine in a Level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON: *Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator*. The seed will be grown for a minimum period of 6 months and will be tested or inspected for regulated pests at the expense of the importer.

Inspection, testing and treatment requirements for *Malus*

ORGANISM TYPES	**MAF ACCEPTABLE METHODS** (See notes below)	**Comments**
Fungi		
Monilinia fructigena	Growing season inspection in PEQ for disease symptom expression.	
Viroid		
Apple scar skin viroid	PCR using the method of Hadidi *et al.* (1990).	
Virus		
Sowbane mosaic virus	Herbaceous indicators Ca & Cq.	
Tomato bushy stunt virus	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.	

Notes:

1. Indicator hosts: *Chenopodium amaranticolor* (Ca), *C. quinoa* (Cq) and *Nicotiana clevelandi* (Nc).
2. Enzyme linked immunosorbent assay (ELISA).
3. Polymerase chain reaction (PCR).
4. With prior notification, MAF will accept other internationally recognised testing methods.
5. 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.
6. Indicator plants must be grown under appropriate temperatures.
7. Indicator plants must be shaded for 12-24 hrs prior to inoculation.
8. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks.
9. Inspect plants at least once per week for signs of pest and disease.
10. Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection.
11. PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.
12. At least two plants of each indicator species unless otherwise stated must be used in mechanical inoculation tests.
13. Positive and negative controls must be used in ELISA tests.
14. Testing must be carried out on plants while they are in active growth.
15. Positive and negative controls (including a blank water control) must be used in PCR. Ideally positive internal controls and a negative plant control should be used. Internal controls in PCR tests are important to avoid the risk of false negatives.

Reference

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

Mangifera

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Mangifera*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Sternochetus mangiferae; Xanthomonas campestris* pv. *mangiferae-indicae*

Entry Conditions: **Basic;** PLUS

1. A prior permit to import is required:

PEQ: Level 1
Minimum Period: 2 growing seasons
Isolation: 50 m

2. Phytosanitary Certificate Additional Declaration:

"The trees from which the seed was harvested were inspected during the growing season *Xanthomonas campestris* pv. *mangiferae-indicae* was not detected".

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Medicago*".

1. Entry conditions for *Medicago* seeds for sowing from approved exporting countries

(i) *Pests of Medicago*
Pea early browning virus; *Peanut stunt virus*; *Trogoderma granarium*; *Xanthomonas campestris* pv. *alfalfae.*

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Medicago* seeds for sowing imported into New Zealand.
Genetically modified seed test certificate: MAF requires that all consignments of *Medicago sativa* (alfalfa/lucerne) that are imported into New Zealand are tested for the presence of unapproved genetically modified seeds (see (vi) in this schedule).

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by the MAF have been undertaken.
The *Medicago* seeds for sowing have been:

– inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including *Trogoderma granarium.*

AND

– sourced from a "Pest free area" or "Pest free place of production", free from *Pea early browning virus, Peanut stunt virus* and *Xanthomonas campestris* pv. *alfalfae*.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Medicago* seeds for sowing in this consignment have been:

– inspected in accordance with appropriate official procedures and found to be free of *Trogoderma granarium*.

AND

– sourced from a "Pest free area" or "Pest free place of production", free from *Pea early browning virus, Peanut stunt virus* and *Xanthomonas campestris* pv. *alfalfae*.

(vi) *Sampling and testing* Medicago sativa *seed consignments for adventitious presence of unapproved genetically modified seeds*
MAF requires all consignments of *Medicago sativa* (alfalfa/lucerne) imported into New Zealand to be representatively sampled, tested, and found to be free of unapproved GM seeds. Alternatively, the seeds must be sourced from companies with MAF approved quality assurance systems which demonstrate equivalence with PCR testing every consignment of GM

Medicago sativa. 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. Complete guidelines for sampling and testing for the presence of GM seeds are specified in the *Protocol for Testing Seed Imports for the Presence of Genetically Modified Seed.* The protocol includes three further options for importers of small volumes of seed (defined as less than 100g for *Medicago sativa*) for cultivar trials and multiplication.

Testing may be conducted by facilities approved by MAF under the requirements specified in the Standard "*Approval of Facilities for Genetically Modified Organism Testing*". If testing is conducted offshore, a copy of the completed test certificate (from a MAF-approved facility) must accompany the consignment imported into New Zealand. MAF will examine the test certificates on arrival to confirm that they reconcile with the actual consignment. Importers must ensure that MAF has access to all pertinent testing records held by MAF-approved testing facilities for audit purposes.

If consignments arrive at the New Zealand border without having been tested for the presence of unapproved GM seeds, MAF will offer the importer the options of re-shipping or destroying the consignment, or having the consignment sampled and tested as above at the importer's expense. Any consignment held at the New Zealand border that is tested and found to contain unapproved GM seeds will not be permitted to enter New Zealand and will be re-shipped or destroyed.

The protocol and a list of MAF-approved facilities for testing for the presence of GM material in *Medicago sativa* are located at the following address on the MAF web site: http://www.biosecurity.govt.nz/regs/imports/plants/gmo

Nicotiana tabacum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Nicotiana tabacum*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Peronospora tabacina*

Entry Conditions: **Basic;** PLUS

OPTION 1:

Phytosanitary Certificate Additional declarations:

"*Peronospora tabacini* is not known to occur in _____ (the country or state where the seed was produced) _____".

OR

(i) "The seed is from a crop that has been inspected during the growing season and no *Peronospora tabacini* was detected".

(ii) "The seed was treated with _____ (insert one of the options below) _____".

Note: One of the following fungicide combinations is to be used:

(i) metalaxyl at 0.7g a.i. per kg seed and captan at 0.7g a.i. per kg seed.

(ii) metalaxyl at 0.7g a.i. per kg seed and thiram at 1g a.i. per kg seed.

(Continued next page)

OPTION 2:

1. The seed is to be untreated before despatch.

2. The seed is to be consigned to a Ministry of Agriculture and Forestry Biosecurity Authority approved Seed Testing Station to test for *Peronospora tabacini*, at the expense of **the importer**.

(a) If the tests are negative the seed is to be treated with one of the following fungicide combinations before release to the importer:

(i) metalaxyl at 0.7 g a.i. per kg seed and captan at 0.7 g a.i. per kg seed.

(ii) metalaxyl at 0.7 g a.i. per kg seed and thiram at 1 g a.i. per kg seed.

(b) If the tests are positive the seed is to be reshipped or destroyed.

OPTION 3:

A prior permit to import is required:

PEQ: Level 3
Minimum Period: 1 growing season

Oxyria

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Oxyria*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Ustilago vinosa*

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Oxyria* seeds for sowing have been:

- treated with one of the following fungicide combinations, either
  - i) Carboxin at 0.8g a.i. per kg seed and thiram at 1g a.i. per kg seed.
  - (ii) Carboxin at 0.8g a.i. per kg seed and captan at 0.7g a.i. per kg seed.
  - (iii) Imazalil at 80mg a.i. per kg seed and triadimenol at 220mg a.i. per kg seed.
  - (iv) Imazalil at 80mg a.i. per kg seed and flutriafol at 80mg a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section. No additional declarations are required.

Panicum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Panicum*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Peronosclerospora sorghi; Sclerospora graminicola; Trogoderma* spp.; Ustilaginales

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Panicum* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Peronosclerospora sorghi* and *Sclerospora graminicola*

AND

- treated with one of the following fungicide combinations, either
  - i) Carboxin at 0.8g a.i. per kg seed and thiram at 1g a.i. per kg seed.
  - (ii) Carboxin at 0.8g a. i. per kg seed and captan at 0.7g a.i. per kg seed.
  - (iii) Imazalil at 80mg a.i. per kg seed and triadimenol at 220mg a.i. per kg seed.
  - (iv) Imazalil at 80mg a.i. per kg seed and flutriafol at 80mg a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

> "*Peronoslerospora sorghi* and *Sclerospora graminicola* are not known to occur in _____ (the country or state where the seed was produced) _____".
>
> **OR**
>
> "The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Peronoslerospora sorghi* or *Sclerospora graminicola* was detected".

Papaver somniferum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.06 under *Papaver somniferum*".

GENERAL CONDITIONS:

Countries: All

Entry Conditions: **Basic;** PLUS

Importers of *Papaver somniferum* seed must obtain written approval from the Ministry of Health prior to importation. Before applying for approval importers must provide a letter of declaration stating the intended use of the seed to:

Director, General of Health
Ministry of Health
P O Box 5013
Wellington
Attention: Advisor, Controlled Drug Licensing
Telephone: 04 496 2018

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Persea*".

GENERAL CONDITIONS:

Countries: USA

Quarantine Pests: Avocado sunblotch viroid; Blackstreak

Entry Conditions: **Basic;** PLUS

A prior permit to import is required:

PEQ: Level 3
Minimum Period: 1 growing season

Phaseolus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Phaseolus* ".

Entry conditions for *Phaseolus* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Phaseolus
Refer to "Pest List for *Phaseolus*".

(ii) *Approved exporting 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.

(iii) *Documentation*
A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Phaseolus* seeds for sowing exported to New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Phaseolus* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including the regulated insects on MAF's "Pest List for *Phaseolus*" and seeds of regulated weed species.

AND

- sourced from a "Pest free area" or "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, Tomato black ring virus*).

AND

EITHER

- sourced from a "Pest free area" free from the named regulated fungi (*Cochliobolus miyabeanus, Elsinoe phaseoli, Phoma exigua* var. *diversispora*).

OR

- treated with one of the fungicide combinations described in MAF's "Approved Treatments for *Phaseolus*".

(v) *Additional declarations to the phytosanitary certificate*

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section (if applicable), and by providing the following additional declaration to the phytosanitary certificate:

"The *Phaseolus* seeds for sowing in this consignment have been:

- sourced from a "Pest free area", free from _____ (name of the regulated bacteria and viruses) _____, and/or a "Pest free place of production", free from _____ (name of the regulated bacteria and viruses) _____.

AND

- [if appropriate] sourced from a "Pest free area", free from _____ (name of the regulated fungi) _____."

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	-
Tomato black ring virus	-

Approved Treatments for *Phaseolus*

Fungicides

One of the following treatments is required:

i) Metalaxyl-M at 0.35 g a.i per kg of seed, fludioxonil at 0.1 g a.i per kg of seed and cymoxanil 0.2 g a.i per kg of seed.

ii) Fosetyl aluminium at 1.53 g a.i per kg of seed, thiram at 0.5 g a.i per kg of seed and thiabendazole at 0.37 g a.i per kg of seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Phoenix*".

1. Entry conditions for *Phoenix* seeds for sowing from approved exporting countries

(i) *Pests of* Phoenix
Coconut cadang-cadang viroid and *Fusarium oxysporum* f. sp. *canariensis*

Note: Seed covered in a fleshy pericarp will not be permitted entry into New Zealand.

(ii) *Approved exporting countries*
All countries except Guam, the Philippines and the Solomon Islands.

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Phoenix* seeds for sowing imported into New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by the MAF have been undertaken.
1. The *Phoenix* seeds for sowing have:
– been inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.
AND
– 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 for sowing, these seeds have:
– been produced in a "Pest free area", free from *Fusarium oxysporum* f. sp. *Canariensis*.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Phoenix* seeds for sowing in this consignment have:
– been produced in an approved country and have not been produced in Guam, the Philippines or the Solomon Islands.

If the consignment contains *Phoenix canariensis*, *Phoenix dactylifera* or *Phoenix reclinata* seeds for sowing, the following further additional declaration is also required:

"The *Phoenix canariensis*, *Phoenix dactylifera* or *Phoenix reclinata* seeds for sowing in this consignment have been produced in a "Pest free area", free from *Fusarium oxysporum* f. sp. *canariensis*."

Pinus

Please refer to the Generic Import Health Standard for Seed for Sowing of *Pinus* spp. from All Countries - 10 July 2002 located at the following website:

http://www.biosecurity.govt.nz/imports/forests/standards/propagable-forest-produce/pinus-spp.htm

Pisum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Pisum"*.

Entry conditions for *Pisum* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Pisum
Refer to "Pest List for *Pisum*".

(ii) *Approved exporting 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.

(iii) *Documentation*
A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Pisum* seeds for sowing exported to New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Pisum* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including the regulated insects on MAF's "Pest List for *Pisum*" and seeds of regulated weed species.

AND

- sourced from a "Pest free area" or "Pest free place of production", free from the named regulated viruses (*Broad bean mottle virus, Broad bean stain virus, Clover yellow mosaic virus, Pea early-browning virus, Pea enation mosaic virus, Peanut mottle virus, Peanut stunt virus*).

AND

EITHER

- sourced from a "Pest free area" free from *Cladosporium cladosporioides* f. sp. *pisicola*.

OR

- treated with one of the fungicide combinations described in MAF's "Approved Treatments for *Pisum*".

(v) *Additional declarations to the phytosanitary certificate*

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section (if applicable), and by providing the following additional declaration to the phytosanitary certificate:

"The *Pisum* seeds for sowing in this consignment have:

- sourced from a "Pest free area", free from _____ (name of the regulated viruses) _____, and/or a "Pest free place of production", free from _____ (name of the regulated viruses) _____.

AND

- [if appropriate] sourced from a "Pest free area", free from *Cladosporium cladosporioides* f. sp. *pisicola*.

(vi) *Pea soak testing on arrival in New Zealand*

For lots of pea seed over 2kg, a small sample of pea seeds (approx 100 grams per lot) will be taken and soaked with water on arrival to verify that the seed is free from any regulated pests (e.g. pea weevil larvae).

Note: Small samples of pea seed (< 2kg) for research purposes do not require the soak test but still require dry inspection.

Pest List for *Pisum*

REGULATED PESTS (actionable)

Insect	
Insecta	
Coleoptera	
Bruchidae	
Acanthoscelides zeteki	bruchid beetle
Bruchidius atrolineatus	seed beetle
Bruchidius incarnatus	seed beetle
Bruchidius quinqueguttatus	bruchid beetle
Bruchus affinis	bruchid beetle
Bruchus emarginatus	Mediterranean pulse beetle
Bruchus ervi	bruchid beetle
Bruchus lentis	bruchid beetle
Bruchus pisorum	pea weevil
Bruchus rufimanus	broad bean weevil
Bruchus tristis	bruchid beetle
Callosobruchus analis	cowpea weevil
Callosobruchus chinensis	oriental cowpea weevil
Callosobruchus maculatus	cowpea weevil
Dermestidae	
Trogoderma granarium	khapra beetle
Lepidoptera	
Lycaenidae	
Euchrysops cnejus	blue butterfly
Noctuidae	
Spodoptera praefica	western yellowstriped armyworm
Pyralidae	
Etiella zinckenella	limabean pod borer
Tortricidae	
Cydia nigricana	pea moth
Fungus	
mitosporic fungi (Hyphomycetes)	
Hyphomycetales	
Dematiaceae	
Cladosporium cladosporioides f. sp. pisicola	cladosporium blight
Virus	
Broad bean mottle virus	-
Broad bean stain virus	-
Clover yellow mosaic virus	-
Pea early-browning virus	-
Pea enation mosaic virus	-

Peanut mottle virus	-
Peanut stunt virus	-

Approved Treatments for *Pisum*

Fungicides

One of the following treatments is required:

i) Metalaxyl-M at 0.35 g a.i per kg of seed, fludioxonil at 0.1 g a.i per kg of seed and cymoxanil 0.2 g a.i per kg of seed.

ii) Fosetyl aluminium at 1.53 g a.i per kg of seed, thiram at 0.5 g a.i per kg of seed and thiabendazole at 0.37 g a.i per kg of seed.

iii) Metalaxyl-M at 0.35 g a.i per kg of seed, fludioxonil at 0.1 g a.i per kg of seed and cymoxanil 0.2 g a.i per kg of seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Populus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Populus*".

GENERAL CONDITIONS:

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

Quarantine Pests: *Marssonina* spp.

Entry Conditions: **Basic;** PLUS

A prior permit to import is required:

PEQ: Level 2 and Level 1

Minimum Period: 2 growing seasons as follows:
- in a Level 2 quarantine facility for the first season
- in a Level 1 quarantine facility subsequently

Isolation: 50m when planted outside

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Prunus*".

1. Entry conditions for *Prunus* seeds for sowing from approved exporting countries

(i) *Pests of* Prunus
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*.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Prunus* seeds for sowing imported into New Zealand.
Import permit: an import permit must be obtained from the MAF prior to the *Prunus* seeds arriving at the New Zealand border.

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

The *Prunus* seeds for sowing have been
– inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including *Eurytoma amygdali*.

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by providing the following additional declarations to the phytosanitary certificate:
"The *Prunus* seeds for sowing in this consignment have been:
– inspected in accordance with appropriate official procedures and found to be free of *Eurytoma amygdali*.

(vi) *Post-entry quarantine requirements*
All *Prunus* seeds must be imported under permit into post-entry quarantine in a Level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON: *Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator*. The seed will be grown for a minimum period of 6 months and will be tested or inspected for regulated pests at the expense of the importer.

Inspection, testing and treatment requirements for *Prunus*

ORGANISM TYPES	**MAF ACCEPTABLE METHODS** (See notes below)	**Comments**
Fungi		
Monilinia fructigena	Growing season inspection in PEQ for disease symptom expression.	
Virus		
Cherry leaf roll virus	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Cs.	
Cherry rasp leaf virus	ELISA or PCR using the method of James *et al.* (1991) AND herbaceous indicators Cq, Cs.	
Plum pox virus	Durviz ELISA (Agdia) or PCR using the method of Wetzel *et al.* (1991) AND herbaceous indicators Nc and Cf.	
Prunus necrotic ringspot virus	ELISA (Agdia) or PCR using the method of Spiegel *et al.* (1996) AND herbaceous indicators Cs.	
Tomato bushy stunt virus	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.	

Notes:

1. Indicator hosts: *Chenopodium foetidum* (Cf), *Chenopodium quinoa* (Cq), *Cucumis sativus* (Cs) and *Nicotiana clevelandii* (Nc).
2. Enzyme linked immunosorbent assay (ELISA).
3. Polymerase chain reaction (PCR).
4. With prior notification, MAF will accept other internationally recognised testing methods.
5. 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.
6. Indicator plants must be grown under appropriate temperatures.
7. Indicator plants must be shaded for 12-24 hrs prior to inoculation.
8. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks.
9. Inspect plants at least once per week for signs of pest and disease.
10. Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection.
11. At least two plants of each indicator species unless otherwise stated must be used in

mechanical inoculation tests.

12. Positive and negative controls must be used in ELISA tests.
13. Testing must be carried out on plants while they are in active growth.
14. Positive and negative controls (including a blank water control) must be used in PCR. Ideally positive internal controls and a negative plant control should be used. Internal controls in PCR tests are important to avoid the risk of false negatives.
15. ELISA or PCR for PPV must test negative before herbaceous indicator tests are conducted.

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.

Pseudotsuga

Please refer to the Generic Import Health Standard for Seed for Sowing of *Pseudotsuga menziesii* from All Countries - 02 March 2001

http://www.biosecurity.govt.nz/imports/forests/standards/propagable-forest-produce/pseudotsuga-menziesii.htm

Psophocarpus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Psophocarpus*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Etiella* spp.; *Maruca testulalis; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

For Seed in Pods:

Phytosanitary Certificate Additional Declaration:

"The pods were inspected before export and no caterpillars of *Etiella* spp. or *Maruca testulalis* were found in a 600 unit sample".

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Pyrus*".

1. Entry conditions for *Pyrus* seeds for sowing from approved exporting countries

(i) *Pests of* Pyrus
Apple scar skin viroid; *Monilinia fructigena*; *Tomato bushy stunt virus*; Pear bark measle.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Pyrus* seeds for sowing imported into New Zealand.
Import permit: an import permit must be obtained from the MAF prior to the *Pyrus* seeds arriving at the New Zealand border.

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

The *Pyrus* seeds for sowing have been:
– inspected in accordance with appropriate official procedures and found to be free of the regulated pests (including regulated weed species) specified by MAF.

(v) *Post-entry quarantine requirements*
All *Pyrus* seeds must be imported under permit into post-entry quarantine in a Level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON: *Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator*. The seed will be grown for a minimum period of 6 months and will be tested or inspected for regulated pests at the expense of the importer.

Inspection, testing and treatment requirements for *Pyrus*

ORGANISM TYPES	**MAF ACCEPTABLE METHODS** (See notes below)	**Comments**
Fungi		
Monilinia fructigena	Growing season inspection in PEQ for disease symptom expression.	
Viroid		
Apple scar skin viroid	PCR using the method of Hadidi *et al.* (1990).	
Virus		
Tomato bushy stunt virus	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.	
Unknown etiology		
Pear bark measle	Growing season inspection in PEQ for disease expression.	

Notes:

1. Indicator hosts: *Chenopodium quinoa* (Cq), and *Nicotiana clevelandi* (Nc).
2. Enzyme linked immunosorbent assay (ELISA).
3. Polymerase chain reaction (PCR).
4. With prior notification, MAF will accept other internationally recognised testing methods.
5. 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.
6. Indicator plants must be grown under appropriate temperatures.
7. Indicator plants must be shaded for 12-24 hrs prior to inoculation.
8. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks.
9. Inspect plants at least once per week for signs of pest and disease.
10. Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection.
11. PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.
12. At least two plants of each indicator species unless otherwise stated must be used in mechanical inoculation tests.
13. Positive and negative controls must be used in ELISA tests.
14. Testing must be carried out on plants while they are in active growth.
15. Positive and negative controls (including a blank water control) must be used in PCR. Ideally positive internal controls and a negative plant control should be used. Internal controls in PCR tests are important to avoid the risk of false negatives.

Reference

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

Quercus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Quercus*".

GENERAL CONDITIONS:

Countries: Australia, Canada, Germany, India, Israel, Japan, Mexico, Spain, Tunisia, UK, USA

Quarantine Pests: *Ceratocystis fagacearum; Cryphonectria parasitica;* Curculionidae

Entry Conditions: **Basic;** PLUS

1. A prior permit to import is required:

2. OPTION 1:

PEQ: Level 1
Minimum Period: 1 growing season
Isolation: 50 m

Phytosanitary Certificate Additional Declarations:

(a) "*Ceratocystis fagacearum* is not known to occur in _____ (the country or state where the seed was produced) _____".

(b) "The seed has been taken from trees that have been officially inspected during active growth and no disease caused by *Cryphonectria parasitica* was detected".

(c) "The seed has been treated with _____ (insert one of the options below) _____ at 2g a.i. per kg seed."

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

captan
thiram

(Continued next page)

(d) "The seed was fumigated with methyl bromide at ___ pressure for ___ hours at ___ g/m^3 at a temperature of___ ^{O}C.

Note: The pressure/time/rate temperature combination used is to be in accordance with the following scale:

Temperature	Rate (g/m^3)	Time (hours)	Pressure
15 - 21^{o}C	32	12	atmospheric
21^{o}C or above	16	12	atmospheric
15 - 21^{o}C	48	1.5	91 kpa vacuum
21^{o}C or above	48	1.0	91 kpa vacuum

OPTION 2:

PEQ: Level 3
Minimum Period: 1 growing season

Phytosanitary Certificate Additional Declaration:

"The seed has been taken from trees that have been officially inspected during active growth and no diseases caused by *Ceratocystis fagacearum* or *Cryphonectria parasitica* were detected".

Ribes

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Ribes*".

Entry conditions for *Ribes* seeds from approved countries
These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Ribes
Refer to the pest list.

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Ribes* seed for sowing imported into New Zealand.
Import permit: an import permit is required.

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

The *Ribes* seeds for sowing have been:
- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests.

(v) *Additional declarations to the phytosanitary certificate*
No additional declarations are required.

(vi) *Post-entry quarantine*
PEQ: All *Ribes* seeds must be imported under permit into post-entry quarantine in a level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON *Specification for the registration of a plant quarantine or containment facility, and operator*.
Quarantine Period: The seed will be grown for a minimum period of 6 months and will be inspected and/or tested for regulated pests at the expense of the importer. Six months is an indicative minimum quarantine period and this period may be extended if material is slow growing, pests are detected, or treatments/testing are required.

Pest List for *Ribes*

REGULATED PESTS (actionable)

Viruses

Raspberry ringspot virus

Tobacco rattle virus
(strains not in New Zealand)

Tomato black ring virus

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

Inspection, Testing and Treatment Requirements for *Ribes*

ORGANISM TYPES	**NZ MAF ACCEPTABLE METHODS** (See notes below)
Virus both 'Currant type' and 'Gooseberry type' *Ribes*)	
Raspberry ringspot virus	ELISA or PCR and herbaceous indexing with Ca and Cq OR Cq , Cs and Nc
'Currant type' *Ribes* only	
Tobacco rattle virus (strains not in New Zealand)	Herbaceous indexing with Ca and Cq OR Cq , Cs and Nc
Tomato black ring virus	ELISA and herbaceous indexing with Ca and Cq OR Cq , Cs and Nc

Key Ca - Chenopodium amaranticolor Cq – Chenopodium quinoa
Cs – Cucumis sativus Nc – Nicotiana clevelandii
ELISA - Enzyme linked immunosorbent assay
PCR - Polymerase chain reaction

Notes:

1. Tests are to be carried out on plants germinated from the imported seeds.

2. The unit for testing is an individual seedling unless evidence is supplied by the exporting NPPO that seeds have been derived from the same mother plant. Bulking of up to 5 seedlings derived from the same mother plant, for ELISA or PCR testing, is acceptable. Samples must be tested individually by herbaceous indexing.

3. Testing must be carried out on plants while they are in active growth.

4. Indicator plants must be grown under appropriate temperatures.

5. Indicator plants must be shaded for 12-24 hrs prior to inoculation.

6. 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.

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. 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.

13. Other internationally recognised testing methods may be accepted by MAF with prior notification.

References

Converse, R.H., ed. 1987. Virus Diseases of Small Fruits. USDA Agriculture Handbook No. 631, 277 pp.

Diekmann M, Frison EA and Putter T (). FAO/IPGRI Technical Guidelines for the Safe Movement of Small Fruit Germplasm, www.ipgri.cgiar.org/Publications/pdf/249.pdf

Hanada, K. and Harrison, BD. (1977). Effects of virus genotype and temperature on seed transmission of nepoviruses. *Ann. appl. Biol*. 85: 79-92

ICTVdB: *The Universal Virus Database, version 4.* http://www.ncbi.nlm.nih.gov/ICTVdb/ICTVdB/

Lister R.M. (1960) Transmission of soil-borne viruses through seed. *Virology*. 10: 4, 547-549

Lister, R.M., Murant A.F., (1967) Seed transmission of nematode-borne viruses. *Ann. appl. Biol*. 59: 49-62

Lister, R.M., Murant A.F. (1967) Seed-transmission in the ecology of nematode-borne viruses. *Ann. appl. Biol*. 59: 63-76

MAF Biosecurity New Zealand Post-Entry Quarantine Testing Manual *Ribes* http://www.biosecurity.govt.nz/files/regs/imports/plants/high-value-crops/ribes-testing-manual.pdf

Rubus idaeus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Rubus idaeus*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: Tomato black ring virus; Tomato ringspot virus.

Entry Conditions: **Basic;** PLUS

A prior permit to import is required:

PEQ: Level 3
Minimum Period: 1 growing season

Sesamum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Sesamum*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Alternaria sesami; Cercoseptoria sesami; Xanthomonas campestris* pv. *sesami; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Sesamum* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Alternaria sesami, Cercoseptoria sesami and Xanthomonas campestris* pv. *sesami*

AND

- treated with Iprodione at 2.5g a.i. per kg of seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

> "*Alternaria sesami, Cercoseptoria sesami* and *Xanthomonas campestris* pv. *sesami* are not known to occur in _____(the country or state where the seed was produced) _____".
>
> **OR**
>
> "The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Alternaria sesami, Cercoseptoria sesami* or *Xanthomonas campestris* pv. *sesami* was detected".

Solanum tuberosum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Solanum tuberosum*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: Andean potato latent virus; Potato black ring virus; Potato spindle tuber viroid; Potato virus T; Tobacco ringspot virus

Entry Conditions: **Basic;** PLUS

A prior permit to import is required:

PEQ: Level 3
Minimum Period: 1 growing season

Sorghum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Sorghum*".

GENERAL CONDITIONS:

Countries: Australia, USA

Quarantine Pests: *Peronosclerospora sorghi; Sclerospora graminicola; Trogoderma* spp.; Ustilaginales

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Sorghum* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Peronosclerospora sorghi* and *Sclerospora graminicola*

AND

- treated with one of the following fungicide combinations, either
  - (i) Carboxin at 0.8g a.i. per kg seed and thiram at 1g a.i. per kg seed.
  - (ii) Carboxin at 0.8g a.i. per kg seed and captan at 0.7g a.i. per kg seed.
  - (iii) Imazalil at 80mg a.i. per kg seed and triadimenol at 220mg a.i. per kg seed.
  - (iv) Imazalil at 80mg a.i. per kg seed and flutriafol at 80mg a.i. per kg seed.

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

"*Peronoslerospora sorghi* and *Sclerospora graminicola* are not known to occur in _____ (the country or state where the seed was produced) _____".

OR

"The seed is from a crop that has been inspected during the growing season and no *Peronosclerospora sorghi* or *Sclerospora graminicola* was detected".

Stenotaphrum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Stenotaphrum*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: Panicum mosiac virus

Entry Conditions: **Basic;** PLUS

A prior permit to import is required:

PEQ: Level 3
Minimum Period: 1 growing season

Trigonella foenum-graecum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Trigonella foenum-graecum*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Cercosporidium traversiana; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Requirements:
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Trigonella foenum-graecum* seeds for sowing have been:

– sourced from a "Pest free area" or "Pest free place of production", free from *Cercosporidium traversiana*

AND

- treated with one of the following fungicide combinations, either
  - i) Benomyl at 2.5 g a.i. per kg seed
  - (ii) Carbendazim at 2.5 g a.i. per kg seed
  - (iii) Thiophanate methyl at 2.5 a.i. per kg seed

Phytosanitary Certificate Additional Declarations:
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section, and by providing the following additional declarations to the phytosanitary certificate:

> "*Cercosporidium traversiana* is not known to occur in _____ (the country or state where the seed was produced) _____".
>
> **OR**
>
> "The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Cercosporidium traversiana* was detected".

Triticum

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Triticum*".

Entry conditions for *Triticum* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Triticum
Refer to "Pest List for *Triticum*".

(ii) *Approved exporting 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.

(iii) *Documentation*
A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Triticum* seeds for sowing exported to New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Triticum* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including the regulated insects and mites on MAF's "Pest List for *Triticum*" and seeds of regulated weed species.

AND

- sourced from a "Pest free area" or "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

- sourced from a "Pest free area" or "Pest free place of production", free from *Anguina tritici*, or inspected microscopically for *Anguina tritici* in accordance with appropriate official procedures .

AND

EITHER

- sourced from a "Pest free area" free from the named regulated fungi (*Alternaria triticina, Cephalosporium gramineum, Curvularia verruculosa*).

OR

- treated with one of the fungicide combinations described in MAF's "Approved Treatments for *Triticum*";

AND

EITHER

- sourced from a "Pest free area" free from *Tilletia controversa* and *Tilletia indica*,

OR

- sourced from a “Pest free place of production”, free from *Tilletia controversa* and *Tilletia indica*, **AND treated** with one of the fungicide combinations described in MAF’s “Approved Treatments for *Triticum*”.

  OR
- a representative sample of 600 seeds, drawn from this consignment according to the International Seed Testing Association’s methodology, has been tested for *Tilletia controversa* and *Tilletia indica*, **AND treated** with one of the fungicide combinations described in MAF’s “Approved Treatments for *Triticum*”.

(v) *Additional declarations to the phytosanitary certificate*

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

"The *Triticum* seeds for sowing in this consignment have been:
- sourced from a “Pest free area”, free from _____ (name of the above regulated bacteria and viruses) _____, and/or a “Pest free place of production”, free from _____ (name of the above regulated bacteria and viruses) _____.

AND
- sourced from a “Pest free area” ”, free from *Anguina tritici*, OR “Pest free place of production”, free from *Anguina tritici*, OR inspected microscopically for *Anguina tritici*.

AND
- sourced from a “Pest free area”, free from _____ (name of the above regulated fungi) _____;

AND

EITHER [choose ONE option]
- sourced from a “Pest free area” free from *Tilletia controversa* and *Tilletia indica*,

  OR
- sourced from a “Pest free place of production”, free from *Tilletia controversa* and *Tilletia indica*,

  OR
- No spores of *Tilletia controversa* or *Tilletia indica* were found in a representative sample of 600 seeds drawn from this consignment."

Approved Treatments for *Triticum*

Fungicides

One of the following treatments is required:

i) Carboxin at 0.8 g a.i. per kg of seed and Thiram at 0.8 g a.i. per k.g of seed.

ii) Flutriafol at 0.05 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per kg of seed.

iii) Triadimenol at 0.23 g a.i. per kg of seed, Imazalil 0.075 g per kg of seed and Fuberidazole 0.15g a.i per kg of seed.

iv) Tebuconazole at 0.025 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per kg of seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Pest List for *Triticum*

REGULATED PESTS (actionable)

Insect	
Insecta	
Blattodea	
Blattidae	
Blatta orientalis	oriental cockroach
Coleoptera	
Bostrichidae	
Dinoderus distinctus	bostrichid beetle
Prostephanus truncatus	larger grain borer
Bruchidae	
Callosobruchus chinensis	oriental cowpea weevil
Curculionidae	
Caulophilus oryzae	broadnosed grain weevil
Dermestidae	
Trogoderma glabrum	khapra beetle
Trogoderma granarium	khapra beetle
Trogoderma grassmani	trogoderma beetle
Trogoderma inclusum	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	
Cynaeus angustus	larger black flour beetle
Latheticus oryzae	longheaded flour beetle

Palorus ratzeburgi	smalleyed flour beetle
Palorus subdepressus	depressed flour beetle
Tribolium audax	American black flour beetle
Tribolium freemani	flour beetle
Ulomoides dermestoides	darkling beetle
Diptera	
Cecidomyiidae	
Contarinia pisi	pea midge
Lepidoptera	
Noctuidae	
Faronta albilinea	wheat head armyworm
Pyralidae	
Corcyra cephalonica	rice moth
Paralipsa gularis	stored nut moth
Tineidae	
Cephitinea colonella	grain moth
Haplotinea insectella	casemaking moth
Psocoptera	
Liposcelidae	
Troctes minutus	psocid
Mite	
Arachnida	
Acarina	
Acaridae	
Caloglyphus krameri	-
Michaelopus macfarlanei	-
Eriophyidae	
Aceria tulipae (vector)	wheat curl mite
Aceria tosichella	wheat curl mite
Tarsonemidae	
Tarsonemus granarius	-
Tuckerellidae	
Tuckerella ablutus	-
unknown Acarina	
Paratriophtydeus coineaurius	-
Nematode	
Secernentea	
Tylenchida	
Anguinidae	
Anguina tritici [vector]	seed gall nematode
Fungus	
Basidiomycota: Ustomycetes	
Ustilaginales	

Tilletiaceae	
Tilletia controversa	dwarf bunt
Tilletia indica	karnal bunt
mitosporic fungi (Hyphomycetes)	
Hyphomycetales	
Dematiaceae	
Alternaria triticina	-
Curvularia verruculosa	-
Moniliaceae	
Cephalosporium gramineum	stripe
Corynebacteriaceae	
Rathayibacter tritici	yellow ear rot
Pseudomonadaceae	
Xanthomonas campestris pv. *undulosa*	leaf streak
Virus	
High plains virus	-
Indian peanut clump virus	-

Ulmus

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Ulmus*”.

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: Cherry leaf roll virus; Elm mottle virus

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declaration:

"Cherry leaf roll virus and Elm mottle virus are not known to occur in _____ (the country or state where the seed was produced) _____".

OR

"The trees from which the seed was harvested were officially inspected during the growing season and no Cherry leaf roll virus or Elm mottle virus was detected".

Vaccinium

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Vaccinium*".

1. Entry conditions for *Vaccinium* seeds for sowing from approved exporting countries

(i) *Pests of* Vaccinium
Refer to "Pest List for *Vaccinium*".

(ii) *Approved exporting countries*
All countries

(iii) *Documentation*
Phytosanitary certificate: a completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all consignments of *Vaccinium* seeds for sowing imported into New Zealand.
Import permit: an import permit must be obtained from the MAF prior to the *Vaccinium* seeds arriving at the New Zealand border.

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

The *Vaccinium* seeds for sowing have been
– inspected in accordance with appropriate official procedures and found to be free of the regulated pests.

(v) *Post-entry quarantine requirements*
All *Vaccinium* seeds must be imported under permit into post-entry quarantine in a Level 3 quarantine facility accredited to MAF standard PBC-NZ-TRA-PQCON: *Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator*. The seed will be grown for a minimum period of 6 months and will be tested or inspected for regulated pests at the expense of the importer.

Pest List for *Vaccinium*

REGULATED PESTS (actionable)

Fungus	
Ascomycota	
Diaporthales	
Valsaceae	
Diaporthe vaccinii (anamorph *Phomopsis vaccinii*)	twig blight
Dothideales	
Botryosphaeriaceae	
Botryosphaeria vaccinii (anamorph *Phyllosticta elongata*)	--
Leotiales	
Sclerotiniaceae	
Monilinia fructigena (anamorph *Monilia fructigena*)	European brown rot
Monilinia vaccinii-corymbosi	brown rot
Virus	
family Bromoviridae	
genus Ilarvirus	
Blueberry shock virus	-
family Comoviridae	
genus Nepovirus	
Blueberry leaf mottle virus	-
Peach rosette mosaic virus	-
Tomato ringspot virus [strains not in New Zealand]	-

Inspection, testing and treatment requirements for *Vaccinium*

ORGANISM TYPES	**MAF ACCEPTABLE METHODS** (See notes below)	**Comments**
Fungi		
Diaporthe vaccinii	Growing season inspection in PEQ for disease symptom expression.	
Botryosphaeria vaccinii	Growing season inspection in PEQ for disease symptom expression.	
Monilinia fructigena	Growing season inspection in PEQ for disease symptom expression.	
Monilinia vaccinii-corymbosi	Growing season inspection in PEQ for disease symptom expression.	
Virus		
Blueberry shock virus	ELISA (Agdia) or PCR AND herbaceous indicators Nb, Nc.	
Blueberry leaf mottle virus	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.	
Peach rosette mosaic virus	ELISA (Agdia) or PCR AND herbaceous indicators Ca, Cq.	
Tomato ringspot virus	ELISA (Agdia) or PCR AND herbaceous indicators Cq, Nc.	

Notes:

10. Indicator hosts: *Chenopodium amaranticolor* (Ca), *C. quinoa* (Cq), and *Nicotiana benthamiana* (Na), *N. clevelandi* (Nc).
11. Enzyme linked immunosorbent assay (ELISA).
12. Polymerase chain reaction (PCR).
13. With prior notification, MAF will accept other internationally recognised testing methods.
14. 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.
15. Indicator plants must be grown under appropriate temperatures.
16. Indicator plants must be shaded for 12-24 hrs prior to inoculation.
17. Maintain post-inoculated indicator species under appropriate glasshouse conditions for at least 4 weeks.
18. Inspect plants at least once per week for signs of pest and disease.
19. Inspect inoculated herbaceous indicator plants at least twice per week for symptoms of virus infection.

20. PCR and ELISA need to be validated using positive controls/reference material prior to use in quarantine testing.
21. At least two plants of each indicator species unless otherwise stated must be used in mechanical inoculation tests.
22. Positive and negative controls must be used in ELISA tests.
23. 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. Ideally positive internal controls and a negative plant control should be used. Internal controls in PCR tests are important to avoid the risk of false negatives.

Vicia

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Vicia* ".

Entry conditions for *Vicia* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Vicia
Refer to "Pest List for *Vicia*".

(ii) *Approved exporting 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.

(iii) *Documentation*
A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Vicia* seeds for sowing exported to New Zealand.

(iv) *Phytosanitary requirements*
Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.
The *Vicia* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, the regulated insects on MAF's "Pest List for *Vicia*" and seeds of regulated weed species.

AND

- sourced from a "Pest free area" or "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, Clover yellow mosaic virus, Pea early-browning virus, Pea enation mosaic virus, Peanut stunt virus, Red clover vein mosaic virus*).

(v) *Additional declarations to the phytosanitary certificate*
If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section (if applicable), and by providing the following additional declaration to the phytosanitary certificate:

"The *Vicia* seeds for sowing in this consignment have been:

- sourced from a "Pest free area", free from _____ (name of the regulated viruses) _____, and/or a "Pest free place of production", free from _____ (name of the regulated viruses) _____.

Pest List for *Vicia*

REGULATED PESTS (actionable)

Insect	
Insecta	
Coleoptera	
Bruchidae	
Bruchidius incarnatus	seed beetle
Bruchidius quinqueguttatus	bruchid beetle
Bruchus atomarius	bruchid beetle
Bruchus dentipes	bruchid beetle
Bruchus pisorum	pea weevil
Bruchus rufimanus	broad bean weevil
Callosobruchus chinensis	oriental cowpea weevil
Callosobruchus maculatus	cowpea weevil
Callosobruchus phaseoli	cowpea weevil
Dermestidae	
Trogoderma granarium	khapra beetle
Tenebrionidae	
Tribolium destructor	dark flour beetle
Diptera	
Cecidomyiidae	
Contarinia pisi	pea midge
Lepidoptera	
Lycaenidae	
Virachola livia	pomegranate butterfly
Virus	
Artichoke yellow ringspot virus	-
Broad bean mottle virus	-
Broad bean stain virus	-
Broad bean true mosaic virus	-
Clover yellow mosaic virus	-
Pea early-browning virus	-
Pea enation mosaic virus	-
Peanut stunt virus	-
Red clover vein mosaic virus	-

Approved Treatments for Vicia

Fungicides

One of the following treatments is required:

i) Metalaxyl-M at 0.35 g a.i per kg of seed, fludioxonil at 0.1 g a.i per kg of seed and cymoxanil 0.2 g a.i per kg of seed.

ii) Fosetyl aluminium at 1.53 g a.i per kg of seed, thiram at 0.5 g a.i per kg of seed and thiabendazole at 0.37 g a.i per kg of seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Vigna

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Vigna*".

GENERAL CONDITIONS:

Countries: All

Quarantine Pests: *Curtobacterium flaccumfaciens* pv. *faccumfaciens; Xanthomonas campestris* pv. *vignicola; Earias vitella; Maruca testulalis; Trogoderma* spp.

Entry Conditions: **Basic;** PLUS

Phytosanitary Certificate Additional Declarations:

(a) "*Curtobacterium flaccumfaciens* pv. *faccumfaciens* and *Xanthomanas campestris* pv. *vignicola* are not known to occur in _____ (the country or state where the seed was produced) _____".

OR

"The seed is from a crop that has been inspected during the growing season according to appropriate procedures and no *Curtobacterium flaccumfaciens* pv. *faccumfaciens* or *Xanthomonas campestris* pv. *vignicola* was detected".

(b) **For seed in pods:**

"The pods were inspected before export and no caterpillars of *Earias vitella* or *Maruca testulalis* were found in a 600 unit sample".

Zea

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as "see 155.02.05 under *Zea*".

Entry conditions for *Zea* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of* Zea
Refer to "Pest List for *Zea*".

(ii) *Approved exporting 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

(iii) *Documentation*
Phytosanitary certificate: A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Zea* seeds for sowing exported to New Zealand.
Genetically modified seed test certificate: MAF requires that all consignments of dent corn/field corn/maize (*Zea mays* var. *indentata*) and sweet corn (*Zea mays* var. *saccharata*) that are imported into New Zealand are tested for adventitious presence of unapproved GM seeds. **Note:** For positive identification of imported consignments that do not require a GM seed test certificate, the full scientific name of the *Zea* species and variety (including variety or sub-species name) must be specified on the phytosanitary certificate, for e.g. *Zea mays* var. *everta* (pop corn). Importers of consignments of *Zea mays* that are not identified appropriately will be offered the options of testing for the presence of unapproved genetically modified (GM) seeds, re-shipment or destruction.

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

The *Zea mays* seeds for sowing have been:
- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including the regulated insects, mites and weed seeds on MAF's "Pest List for *Zea mays*".

AND
- sourced from a "Pest free area" or "Pest free place of production", free from the named regulated bacteria (*Acidovorax avenae* subsp. a*venae*, *Clavibacter michiganensis* subsp. *Nebraskensis*, *Pantoea stewartii* subsp. *stewartii*) and viruses (*High plains virus*, *Maize dwarf mosaic virus*, *Maize mottle chlorotic stunt virus*).

OR
- a representative sample, officially drawn from this consignment according to ISTA or AOSA methodology, has been tested for the presence of the named regulated bacteria (*Acidovorax avenae* subsp. *avenae*, *Clavibacter michiganensis* subsp. *nebraskensis*, *Pantoea stewartii* subsp. *stewartii*) and viruses (*High plains virus*, *Maize dwarf mosaic virus*, *Maize chlorotic mottle virus*). The testing and treatment requirements are specified following this section.

AND

- 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*, *Phaeocytostroma ambiguum*, *Sclerophthora rayssiae* var. *zeae*, *Rhizopus maydis, Stenocarpella macrospora* and *Cephalosporium maydis*).
  OR
- treated with one of the fungicide combinations described in MAF's "Approved Treatments for *Zea mays*";

(v) *Additional declarations to the phytosanitary certificate*

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by **recording the treatments** applied in the "Disinfestation and/or Disinfection Treatment" section (if applicable), and by providing the following additional declarations to the phytosanitary certificate:

"The *Zea mays* seeds for sowing in this consignment have been:

- sourced from a "Pest free area", free from _____ (name of the regulated bacteria and viruses) _____, and/or a "Pest free place of production", free from _____ (name of the regulated bacteria and viruses) _____ and/or _____ (name of the regulated bacteria and viruses) _____ was not detected in a representative sample of seeds officially drawn from this consignment.

AND

- [If appropriate] sourced from a "Pest free area", free from _____ (name of the regulated fungi) _____;

(vi) *Sampling and testing Zea mays seed consignments for adventitious presence of unapproved genetically modified seeds*

MAF requires that all consignments of dent corn/field corn/maize (*Zea mays* var. *indentata*) and sweet corn (*Zea mays* var. *saccharata*) that are imported into New Zealand are representatively sampled, tested, and found to be free of unapproved GM seeds. 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. Complete guidelines for sampling and testing for the presence of GM seeds are specified in the *Protocol for Testing Seed Imports for the Presence of Genetically Modified Seed*. The protocol includes three further modified options for importers of small volumes of seed (defined as less than 5 kg for *Zea mays*) for cultivar trials and multiplication.

Testing may be conducted by facilities approved by MAF under the requirements specified in the standard "*Approval of Facilities for Genetically Modified Organism Testing"*. A copy of the completed test certificate (from a MAF-approved facility) must accompany the consignment imported into New Zealand. MAF will examine the test certificate on arrival to confirm that they reconcile with the actual consignment. Importers must ensure that MAF has access to all pertinent testing records held by MAF-approved testing facilities for audit purposes.

If consignments arrive at the New Zealand border without having been tested for the presence of unapproved GM seeds, MAF will offer the importer the options of re-shipping or destroying the consignment, or having the consignment sampled and tested as above under the importer's

expense. Only consignments found not to contain GM seeds will receive biosecurity clearance.
The protocol and a list of MAF-approved facilities for testing for the presence of GM material in *Zea mays* are located at the following address on the MAF website - http://www.biosecurity.govt.nz/regs/imports/plants/gmo

Approved Testing and Treatment Requirements for *Zea mays*

Testing

Pantoea stewartii* subsp. *stewartii
A negative result from testing a representative sample of 400 seeds using the immunosorbent assay test described by Lamka *et al.* (1991) may be used to show that the consignment is free of *Pantoea stewartii* subsp. *stewartii*.

Clavibacter michiganensis* subsp. *nebraskensis
A negative result from testing a representative sample of 400 seeds using the sCNS Culture Plate Method (Shepherd, 1999; www.seedhealth.org) may be used to show that the consignment is free of *Clavibacter michiganensis* subsp. *nebraskensis*.

Acidovorax avenae* subsp. *avenae
A negative result from testing a representative sample of 400 seeds using the methodology of Dange *et al.* (1978) may be used to show that the consignment is free of *Acidovorax avenae* subsp. *avenae*.

High plains virus* and *Maize dwarf mosaic 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 may be used to show that the consignment is free of *High plains virus* and *Maize dwarf mosaic virus*.

Maize chlorotic mottle virus
Due to the low levels of seed transmission MAF will consider testing based upon request and will calculate the sample size required based upon the size of the consignment and at 95% confidence levels.

N.B – MAF will consider equivalent testing methods to the above upon request.

Treatments

Fungicides
The active ingredients in one of the following treatments are required:
(i) Carboxin at 0.8 g a.i. per kg seed & thiram at 0.8 g a.i. per kg seed.
(ii) Carboxin at 0.8 g a.i. per kg seed & captan at 0.7 g a.i. per kg seed.
(iii) Fludioxonil at 0.025 g a.i.per kg seed & metalaxyl at 0.03 g a.i. per kg seed.
(iv) Imazalil at 80 mg a.i. per kg seed & triadimenol at 220 mg a.i. per kg seed.
(v) Imazalil at 80 mg a.i. per kg seed & flutriafol at 80 mg a.i. per kg seed.
(vi) Difenoconazole at 0.12 g a.i per kg seed & mefenoxam at 0.01g a.i per kg seed.
(vii) Fludioxonil at 0.025 g a.i.per kg seed & mefenoxam at 0.01 g a.i. per kg seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Note. Where the treatment can not be applied offshore, the seed consignment may be treated on arrival at a registered transitional facility (New Zealand Ministry of Agriculture and Forestry *Standard for General Transitional Facilities for Uncleared Goods*).

References

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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

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Pest List for *Zea* (Seed for Sowing)

Scientific name	Organism type	Common name	Quarantine status	Measures to prevent entry	Actions on interception
Acidovorax avenae subsp. *avenae*	bacterium	bacterial blight	**Regulated**	6 or 7 or 8	3
Clavibacter michiganensis subsp. *nebraskensis*	Bacterium	Goss' bacterial wilt	**Regulated**	6 or 7 or 8	3
Pantoea stewartii	Bacterium	Stewart's bacterial wilt	**Regulated**	6 or 7 or 8	3
Botryosphaeria zeae	Fungus	grey ear rot	**Regulated**	5 or 7	3
Cephalosporium maydis	Fungus	-	**Regulated**	5 or 7	3
Claviceps gigantea	Fungus	ergot	**Regulated**	5 or 7	3
Cochliobolus pallescens	Fungus	maize leaf spot	**Regulated**	5 or 7	3
Cochliobolus tuberculatus	Fungus	leaf spot	**Regulated**	5 or 7	3
Gloeocercospora sorghi	Fungus	zonate leaf spot	**Regulated**	5 or 7	3
Peronosclerospora heteropogoni	Fungus	-	**Regulated**	5 or 7	3
Peronosclerospora maydis	Fungus	Java downy mildew	**Regulated**	5 or 7	3
Peronosclerospora philippinensis	Fungus	Philippine downy mildew	**Regulated**	5 or 7	3
Peronosclerospora sacchari	Fungus	-	**Regulated**	5 or 7	3
Peronosclerospora sorghi	Fungus	sorghum downy mildew	**Regulated**	5 or 7	3
Phaeocytostroma ambiguum	Fungus	-	**Regulated**	5 or 7	3
Rhizopus maydis	Fungus	rhizopus seed rot	**Regulated**	5 or 7	3
Sclerophthora rayssiae var. *zeae*	Fungus	-	**Regulated**	5 or 7	3
Stenocarpella macrospora	Fungus	dry rot	**Regulated**	5 or 7	3
Ustilago maydis	Fungus	boil smut	**Regulated**	5 or 7	3
Alphitobius laevigatus	Insect	black fungus beetle	**Regulated**	2	3
Attagenus unicolor	Insect	black carpet beetle	**Regulated**	2	3
Carpophilus freemani	Insect	dried fruit beetle	**Regulated**	2	3

Carpophilus lugubris	Insect	dusky sap beetle	**Regulated**	2	3
Cathartus quadricollis	Insect	squarenecked grain beetle	**Regulated**	2	3
Caulophilus oryzae	Insect	broadnosed grain weevil	**Regulated**	2	3
Corcyra cephalonica	Insect	rice moth	**Regulated**	2	3
Cryptophlebia leucotreta	Insect	false codling moth	**Regulated**	2	3
Cynaeus angustus	Insect	larger black flour beetle	**Regulated**	2	3
Dinoderus distinctus	Insect	bostrichid beetle	**Regulated**	2	3
Dinoderus minutus	Insect	bamboo powderpost beetle	**Regulated**	2	3
Doloessa viridis	Insect	-	**Regulated**	2	3
Euxesta stigmatias	Insect	-	**Regulated**	2	3
Gibbium psylloides	Insect	shiny spider beetle	**Regulated**	2	3
Glischrochilus quadrisignatus	Insect	four-spotted sap beetle	**Regulated**	2	3
Gnatocerus maxillosus	insect	slenderhorned flour beetle	**Regulated**	2	3
Latheticus oryzae	Insect	longheaded flour beetle	**Regulated**	2	3
Lepinotus reticulatus	Insect	booklouse	**Regulated**	2	3
Leptoglossus zonatus	Insect	coreid bug	**Regulated**	2	3
Liposcelis bostrychophilus	Insect	booklouse	**Regulated**	2	3
Liposcelis entomophilus	Insect	grain psocid	**Regulated**	2	3
Liposcelis paetus	Insect	booklouse	**Regulated**	2	3
Mussidia nigrivenella	Insect	pyralid moth	**Regulated**	2	3
Pagiocerus frontalis	Insect	bark borer	**Regulated**	2	3
Palorus ratzeburgi	Insect	smalleyed flour beetle	**Regulated**	2	3
Palorus subdepressus	Insect	depressed flour beetle	**Regulated**	2	3
Paralipsa gularis	Insect	stored nut moth	**Regulated**	2	3
Pharaxonotha kirschiI	Insect	Mexican grain beetle	**Regulated**	2	3
Prostephanus truncatus	Insect	larger grain borer	**Regulated**	2	3
Pyroderces rileyi	Insect	pink scavenger caterpillar	**Regulated**	2	3
Sesamia calamistis	Insect	pink stalk borer	**Regulated**	2	3

Sesamia nonagrioides	Insect	pink borer	**Regulated**	2	3
Teretriosoma nigrescens	Insect	-	**Regulated**	2	3
Tribolium freemani	Insect	flour beetle	**Regulated**	2	3
Trogoderma glabrum	Insect	khapra beetle	**Regulated**	2	3
Trogoderma granarium	Insect	khapra beetle	**Regulated**	2	3
Trogoderma inclusum	Insect	trogoderma beetle	**Regulated**	2	3
Trogoderma variabile	Insect	warehouse beetle	**Regulated**	2	3
Acaropsellina sollers	Mite	-	**Regulated**	2	3
High plains virus	Virus	-	**Regulated**	6 or 7 or 8	3
Maize chlorotic mottle virus	Virus	-	**Regulated**	6 or 7 or 8	3
Maize dwarf mosaic virus	Virus	MDMV	**Regulated**	6 or 7 or 8	3
Striga asiatica	Weed	witch-weed	**Regulated**	2	3
Striga hermonthica	Weed	witch-weed	**Regulated**	2	3

Measures to prevent entry and establishment

1. No measures.
2. Seed and associated packaging inspected and found to be free from visually detectable regulated pests.
3. Consignments are free from extraneous material, e.g., soil, plant residue that may carry regulated pests.
4. Undergone effective pre-export treatment for regulated pests.
5. Undergone specified pre-export treatment for regulated pests.
6. Undergone specified pre-export testing for regulated pests.
7. Sourced from a pest free area.
8. Sourced from a pest free place of production.

Actions on interception

1 No action.
2 Removal of extraneous material, e.g., soil, plant residue that may carry regulated pests.
3 Treat (if appropriate), reship or destroy.
4 Reship or destroy and suspend pathway.
5 No action if pest not viable.