Ministry for Primary Industries
Manatū Ahu Matua

26 February 2020

Kia ora,

Subject: Proposed changes to import requirements in Import Health Standards (IHSs) 155.02.05: *Seeds for Sowing* and 155.02.06: *Importation of Nursery Stock*

The Ministry for Primary Industries (MPI) invites feedback on proposed changes to import requirements in IHS 155.02.05: *Seeds for Sowing* and IHS 155.02.06: *Importation of Nursery Stock*. You are being contacted as a stakeholder with an interest in the following matters and are invited to comment on the proposed changes to import requirements for seeds for sowing and nursery stock.

IHS 155.02.05: *Seeds for Sowing*

- Adoption of hot water treatment performed onshore at an MPI-approved facility as a phytosanitary measure for regulated bacteria on *Apiaceae* and *Cannabis sativa* seeds for sowing.
- Adoption of molecular testing as an offshore phytosanitary measure for *Tomato brown rugose fruit virus* on *Capsicum* and *Solanum lycopersicum* seeds for sowing.
- Addition of an option for importers to provide a non-GMO declaration to meet the genetically modified (GM) requirements for *Petunia* seeds for sowing.
- Removal of requirement for 'appropriate common name' to be specified on phytosanitary certificates for *Petunia* seeds for sowing.

IHS 155.02.06: *Importation of Nursery Stock*

- Addition of an option for importers to provide a non-GMO declaration to meet the GM requirements for *Petunia* nursery stock (whole plants, cuttings and tissue cultures).
- Amendment to information required on GM testing certificates for *Petunia* nursery stock (whole plants, cuttings and tissue cultures).
- Removal of the requirement for an import permit for *Petunia* tissue cultures.

MPI's assessment for each of the proposed changes to import requirements is included in Appendix 1 of this letter. Proposed amendments to the corresponding schedules of special conditions in IHS 155.02.05: *Seeds for Sowing* and IHS 155.02.06: *Importation of Nursery Stock* are included in Appendix 2 of this letter.

MPI seeks comment on the proposed changes by Monday, 6th April 2020. Any questions and all submissions should be directed to PlantImports@mpi.govt.nz.

Yours sincerely,

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Appendix 1

Assessment of proposed changes to import requirements in IHS 155.05.05: *Seeds for Sowing* and IHS 155.05.06: *Importation of Nursery Stock*

- **Adoption of hot water treatment performed onshore at an MPI-approved facility as a phytosanitary measure for regulated bacteria on *Apiaceae* and *Cannabis sativa* seeds for sowing.**

Background

1. Hot water treatment of seeds is an MPI-approved phytosanitary measure to manage risk from regulated bacteria on *Apiaceae* and *Cannabis sativa* seeds for sowing in IHS 155.02.05: *Seeds for Sowing*.

2. To manage risk from regulated bacteria '*Candidatus liberibacter* haplotypes C,D and E' on *Apiaceae* seeds for sowing, importers are given the option of treating seeds with hot water in lieu of a country freedom declaration, or having their seeds tested and found free from '*Candidatus liberibacter* haplotypes C,D and E using an NPPO-approved PCR method. Hot water treatment of *Apiaceae* seeds for sowing must be performed at a minimum temperature of 50◦C for at least 20 continuous minutes, as per the MPI Approved Biosecurity Treatments Standard (MPI-ABTRT, 2020).

3. To manage risk from regulated bacteria *Pseudomonas syringae pv. cannabina* and *Xanthomonas campestris pv. cannabina* on *Cannabis sativa* seed for sowing, importers are given the option of treating seeds with hot water in lieu of a 'pest free area' or 'pest free place of production' declaration. Hot water treatment of *Cannabis sativa* seeds for must be performed at a temperature of 50◦C for 30 minutes or 60◦C for 10 minutes, as per the MPI Approved Biosecurity Treatments Standard (MPI-ABTRT, 2020).

4. Current IHS requirements for *Apiaceae* and *Cannabis sativa* seeds for sowing is that hot water treatment of seeds must be done offshore, prior to export and endorsed in the phytosanitary certificate by the exporting NPPO. However there is interest from a number of seed companies to perform hot water treatment of seeds onshore in New Zealand. Therefore MPI are assessing the addition of an option for hot water treatments for *Apiaceae* and *Cannabis sativa* seeds for sowing to be performed onshore at an MPI-approved facility.

Assessment of measures

5. MPI propose to amend IHS 155.02.05: *Seeds for Sowing* to allow hot water treatment of *Apiaceae* and *Cannabis sativa* seeds for sowing to be performed onshore as an MPI-approved biosecurity treatment.

6. The MPI Approved Biosecurity Treatments Standard will be updated to indicate that hot water treatment of *Apiaceae* and *Cannabis sativa* seeds for sowing can be performed onshore. By allowing hot water treatment to be performed onshore, domestic companies can apply to become MPI-approved treatment providers and perform this phytosanitary treatment in New Zealand.

7. Provision for hot water treatment of *Apiaceae* and *Cannabis sativa* seeds to be performed onshore at a MPI-approved facility is justified because the measure will facilitate trade whilst effectively maintaining New Zealand's Appropriate Level of Protection (ALOP).

(i) Hot water treatment is an effective phytosanitary measure against seed-borne regulated bacteria on *Apiaceae* and *Cannabis sativa* seeds for sowing (McGrath MT, 2005; McPartland *et al.* 2000).

(ii) There is no change to the measure as hot water treatment of *Apiaceae* and *Cannabis sativa* seed is currently approved to be performed offshore.

(iii) There will not be any increase in biosecurity risk if the measure if performed onshore. Hot water treatment performed onshore by an MPI-approved treatment provider will provide the same phytosanitary outcome as the treatment performed offshore. It provides the same phytosanitary assurance as endorsement of the phytosanitary certificate by the exporting NPPO that the hot water treatment performed offshore was done as per the requirements of the IHS and does not expose New Zealand to any additional risk.

- **Adoption of molecular testing as an offshore phytosanitary measure for T*omato brown rugose fruit virus* on *Capsicum* and *Solanum lycopersicum* seeds for sowing.**

Background

8. *Tomato brown rugose fruit virus* (ToBRFV; genus Tobamovirus) is a quarantine pest of concern to New Zealand. ToBRFV causes natural infection in tomato (*Solanum lycopersicum*) and capsicum (*Capsicum annuum*) plants (EPPO, 2020).

9. Tomato plants infected with ToBRFV show foliar symptoms including chlorosis, mosaic and mottling. Fruits may appear deformed and show yellow or brown spots with rugose symptoms rendering them unmarketable (EPPO Alert List, 2020). Capsicum plants infected with ToBRFV show foliar symptoms of deformation, yellowing and mosaic. Fruits are deformed with yellow or brown areas or green stripes (EPPO Alert List, 2020).

10. ToBRFV symptoms in tomato plants were first observed in Southern Israel in autumn 2014 and had spread to other tomato growing regions of the country by February 2015 due to human-aided spread and trade in infected seeds and seedlings (EPPO, 2020). The virus has now been detected in Jordan, Italy (Sicily), Mexico, Turkey, China, UK, USA (California), Netherlands, Greece, Spain and France (EPPO, 2020; French Ministry of Agriculture and Food, 2020).

11. ToBRFV has not been reported from New Zealand (not recorded in Veerakone *et al.* 2015), and is regulated in the Biosecurity Organisms Register for Imported Commodities (BORIC, 2020).

12. MPI implemented emergency measures for ToBRFV on tomato and capsicum seeds for sowing in March 2019, as the likelihood of introduction on these pathways to cause unacceptable economic and social impacts was deemed high. This was for the following reasons:

(i) The risk of entry of TobBRFV into New Zealand is high as the virus is seed-borne and the pathway for tomato and capsicum seeds is open and active from countries where it is known to be present.

(ii) Tobamoviruses are known to remain infective in seeds, soil and plant material for months. As seed-borne pathogens they are found in the seed coat and endosperm, therefore seed disinfection treatments do not provide effective control. ToBRFV is suspected to be seed transmitted, although this is yet to be verified (EPPO Alert List, 2020).

(iii) ToBRFV can rapidly spread within crops by:

- contact (contaminated tools, hands, clothing, direct plant-to-plant contact) (EPPO Alert list, 2020)
- propagation material (grafts, cuttings) (EPPO Alert List, 2020)
- pollinating bumblebees (Levitzky *et al.* 2019)

Once the virus is detected in an area, control measures are limited to removal of infected plants and implementing hygiene strategies. Such measures have economic consequences for affected growers due to crop losses being up to 100%.

(iv) Outbreaks of ToBRFV have currently been described in tomato and capsicum crops grown in glasshouses (Ling *et al*, 2019; Panno *et al.* 2019; Fidan *et al.* 2019). Commercial tomato and capsicum crops are commonly grown under glasshouse conditions in New Zealand, although smaller quantities of fresh tomatoes are also field grown. Tomato production in glasshouses utilises buzz pollination (FreshFacts, 2018; Tomatoes NZ). The availability of suitable host plants, grown under conditions conducive to the spread of the virus increases the likelihood of exposure and establishment of ToBRFV in New Zealand.

(v) ToBRFV would cause economic and social impacts if it were to enter and establish in New Zealand.

- In 2018, the domestic value of glasshouse grown tomatoes was $200 million and outdoor-grown tomatoes was $8.5 million. Exported tomatoes were worth $12.7 million (FreshFacts, 2018).
- In 2018, the domestic value of capsicum crops was $25 million and export value was $21 million (FreshFacts, 2018).
- Tomato and capsicum crop losses due to ToBRFV infection, and potentially due to control activities, would affect both the domestic and export market.
- Tomato plants are also widely grown by home gardeners in different parts of New Zealand, both outdoors and in glass houses (MPI, 2012). ToBRFV would cause social impacts if it were to enter New Zealand due to crop losses by home gardeners and potentially the removal of plants for control purposes.

13. The table below shows current phytosanitary measures to mitigate the risk of ToBRFV on tomato and capsicum hosts eligible to be imported as seeds for sowing under the specific requirements for *Solanum lycopersicum* and *Capsicum* in IHS 155.02.05: *Seeds for Sowing*.

Host species	**Specific requirements in IHS 155.02.05: *Seeds for Sowing***	**Phytosanitary measures for ToBRFV**
Solanum lycopersicum *Solanum lycopersicum x Solanum habrochaites*	*Solanum lycopersicum*	Tomato and capsicum seeds for sowing must be accompanied by a phytosanitary certificate endorsed with one of the following additional declarations: (i) sourced from 'pest free area', free from *Tomato brown rugose fruit virus*"; OR (ii) sourced from a 'pest free place of production' free from for *Tomato brown rugose fruit virus*"; OR
Capsicum annuum *Capsicum baccatum* *Capsicum cardenasii*	*Capsicum*	

Capsicum Chinese *Capsicum eximium* *Capsicum frutescens* *Capsicum microcarpum* *Capsicum pendulum* *Capsicum pubescens*		(iii) officially tested, on a representative sample of a minimum of 3000 seeds officially drawn according to the ISTA or AOSA sampling methodology, using an approved ELISA NPPO testing method and found free from *Tomato brown rugose fruit virus*". Testing requirements iv. Testing is required to be completed offshore prior to export, or on arrival in New Zealand. v. Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory. vi. Testing on-shore will be performed using an MPI-approved testing method.

14. The current IHS testing requirement for tomato and capsicum seeds is that offshore testing for ToBRFV is done using an NPPO-approved ELISA. However, for onshore testing, the MPI-approved testing laboratory can perform either a serological assay (ELISA) or a molecular assay (PCR).

15. MPI have received requests from importers to test their tomato seeds for sowing offshore for ToBRFV using an NPPO-approved PCR test instead of an NPPO-approved ELISA, as many exporting NPPO's have now adopted PCR testing for the virus. Therefore, MPI is assessing whether molecular testing using PCR may be offered as an offshore phytosanitary option in addition to ELISA to manage risk from ToBRFV on imported tomato and capsicum seeds for sowing.

Assessment of measures

16. MPI propose to amend the specific requirements for *Capsicum* and *Solanum lycopersicum* in IHS 155.02.05: *Seeds for Sowing* to allow testing for ToBRFV on tomato and capsicum seeds using a NPPO approved serological (ELISA) or molecular (PCR) method to be performed either offshore or onshore.

17. The proposed amendment is justified for the following reasons:

(i) Molecular (PCR) and serological (ELISA) diagnostic methods are routinely used to detect pests in seeds. Both methods are sensitive for detecting specific viruses, including ToBRFV.

(ii) There are internationally recognized and validated PCR and ELISA diagnostic protocols available to test for ToBRFV in tomato and capsicum seeds which will avoid false positive or negative results.

(iii) MPI Plant Health & Environment Laboratory (PHEL) have the capability to PCR-test tomato and capsicum seeds for ToBRFV onshore using generic tobamovirus primers or ToBRFV-specific primers. Many exporting countries have adopted validated PCR protocols for testing for ToBRFV on tomato and capsicum seeds. For example Australia, where ToBRFV is a regulated pest, requires mandatory PCR testing of tomato seeds using a Department-approved protocol with recommended primers for detection to ToBRFV (Australian Department of Agriculture, Water and the Environment, 2019).

(iv) Phytosanitary certificate endorsement by the exporting NPPO that an approved PCR or ELISA method has been used to test tomato and capsicum seeds destined for export to New Zealand and found free of ToBRFV provides sufficient assurance that risk is managed in accordance with New Zealand's ALOP. NPPO-approved ELISA or PCR testing are phytosanitary options to manage pests with similar risk profiles on the Seeds for Sowing IHS, for example, tobamovirus *Kyuri green mottle mosaic virus* on *Cucurbitaceae* seeds for sowing.

(v) The measure will be trade-enabling and allow biosecurity risk to be managed pre-border. Offshore testing of tomato and capsicum seeds using an exporting NPPO-approved testing method does not change the outcome of the test and provides the same level of assurance as onshore testing that the imported seeds are free of ToBRFV.

(vi) Exporting NPPO endorsement on the phytosanitary certificate that a minimum of 3000 seeds officially drawn according to the ISTA or AOSA sampling methodology were tested and found free from ToBRFV provides assurance that the sample tested is representative of the seed lot in accordance with the current ALOP established for seeds for sowing.

- **Addition of an option for importers to provide a non-GMO declaration to meet the genetically modified (GM) requirements for *Petunia* seeds for sowing and *Petunia* nursery stock (whole plants, cuttings and tissue cultures).**

Background

18. Genetically modified organisms (GMOs) are classed as new organisms under section 2A (1) of the Hazardous Substances and New Organisms (HSNO) Act 1996. Importation of GM seeds and nursery stock into New Zealand without approval from the Environmental Protection Authority (EPA) is illegal as it breaches the HSNO Act. To date, no genetically modified seeds or nursery stock have been approved by the EPA for release into New Zealand.

19. MPI's primary HSNO enforcement role at the border is to mitigate the risk of introducing a new or unapproved organism into New Zealand. Clearance is given to goods in accordance with the Biosecurity Act 1993, and an inspector must not give clearance to goods that may be, or contain, unwanted or new organisms.

20. In 2017, GM *Petunia* plants, imported from German and Dutch companies were found on the Finnish market by the Finnish Food Safety Authority. Soon after, several GM varieties of *Petunia* were reported in Europe, USA, UK and Australia and were recalled by the regulatory authorities in those countries (Fraiture *et al.*, 2019). In May 2017, MPI was informed by two importers that the *Petunia* x*hybrida* 'African sunset' variety that had tested positive for a GM construct in Finland had also been imported into New Zealand since 2014 and distributed nationally to the nursery industry and retailers (MPI 2017, GM Petunias).

21. MPI initiated a biosecurity response on 29 May 2017 to curtail the import and spread of GM *Petunia* varieties in New Zealand. The Seeds for Sowing and Importation of Nursery Stock IHSs were subsequently amended under urgency to incorporate specific measures to prevent the entry of unapproved GM *Petunia* on the seeds for sowing and plants for planting import pathways (MPI 2019, Summary of New Measures for *Petunia* Seed).

22. The main driver for application of emergency measures on *Petunia* seeds for sowing and plants for planting and the 2017 *Petunia* biosecurity response was to mitigate the risk of spread of GMOs in New

Zealand in breach of the HSNO Act, rather than increased biosecurity risk from imported GM Petunias.

23. Current import requirements for *Petunia* seeds for sowing and plants for planting require all imported *Petunia* seed lots and plants for planting varieties to be representatively sampled, tested at an MPI-approved or recognized testing laboratory and found to be free of GM material according to the MPI Protocol for the Testing for the Presence of Genetically Modified Plant Material.

24. Stakeholders have expressed concern that the GM testing requirements for *Petunia* seeds and plants for planting are too stringent in the current climate where the risk of introduction of GM *Petunia* into New Zealand is low. GM *Petunias* have been recalled by exporting countries and pulled from the New Zealand market following the GM *Petunia* response that ended successfully in May 2018.

Assessment of measures

25. MPI propose to amend the specific requirements for *Petunia* in IHS 155.02.05: *Seeds for Sowing* and requirements of the *Petunia* schedule in IHS 155.02.06: *Importation of Nursery Stock* to provide importers of *Petunia* seed for sowing and plants for planting the option to provide a non-GMO declaration as an alternative to the existing option of presenting a GM testing certificate.

26. A non-GMO declaration provided by the importer is a suitable option to manage the risk of introduction of genetically modified plant material into New Zealand where the risk of GM entry is low. This is a justified risk management measure for *Petunia* seeds for sowing and plants for planting because:

(i) The risk of entry of GM *Petunia* into New Zealand on the seed for sowing and plants for planting import pathways is currently considered to be low. Since varieties of GM *Petunia* were reported on the market in various countries around the world in 2017, regulatory authorities in the affected countries have taken steps to recall the GM varieties and to ensure that they were removed from the international trade circulation. (Australian Government. Department of Health, 2018; Rostoks *et al.*, 2019)

(ii) MPIs biosecurity response to the incursion from GM *Petunia* seeds and plants for planting that ran between 29 May 2017 and 1 May 2018 was considered to have met all its objectives and reached the outcome of minimising and managing the impacts of the presence of GM Petunias in New Zealand.

(iii) A non GMO declaration provided by the importer will provide assurance that imported *Petunia* seed for sowing and plants for planting are compliant with the HSNO Act. A non-GMO declaration gives qualitative assurance based on knowledge of the origin and production standards of the consignment, rather than the quantitative assurances provided by GM testing. However both measures achieve the same outcome of mitigating risk of introduction of GM plant material into New Zealand.

(iv) The declaration is made on the basis that the importer has obtained assurances from the breeder or seed supplier about the origin, parentage, production standards and traceability of the seed or nursery stock as appropriate to assure themselves that the imported germplasm is GM-free.

(v) The measure seeks to minimise the potential for imported unapproved GM seeds, enable a high degree of industry compliance and minimise general market and crown costs for post-border incursions involving unapproved GM crops.

(vi) The option to provide a non-GMO declaration has previously been consulted on for other low-risk GM species imported as seeds for sowing and plants for planting, such as *Linum usitatissimum* (linseed)

seeds for sowing and *Solanum tuberosum* tissue cultures. In 2010, MPI publically consulted and adopted measures for *Linum usitatissimum* seeds for sowing providing an option for importers to make a declaration stating that their consignment does not contain genetically modified organisms in lieu of a GM-testing certificate. For *Solanum tuberosum* imported as plants in tissue cultures, MPI adopted a signed non-GMO declaration from the importer and exporter as a measure to mitigate the risk of introduction of GM potato varieties into New Zealand.

- **Removal of the requirement for 'appropriate common name' to be specified on phytosanitary certificates for *Petunia* seeds for sowing.**

Background

27. A schedule of specific requirements for *Petunia* seeds was created in IHS 155.02.05: *Seeds for Sowing* in June 2017 after MPI initiated a biosecurity response to stop the spread of GM *Petunia* varieties in New Zealand. The specific requirements for *Petunia* seeds for sowing included measures to mitigate the risk of introducing genetically modified Petunia varieties into New Zealand in contravention of the HSNO Act.

28. The measures required importers to provide a phytosanitary certificate endorsed by the National Plant Protection Organisation of the exporting country specifying the full scientific name of the *Petunia* species and variety, plus the appropriate common name, as well as a GM testing certificate certifying that the imported seed was not genetically modified.

29. The requirement for the 'appropriate common name' to be specified on the phytosanitary certificate was included in recognition of the high risk of entry of new organisms into New Zealand on the *Petunia* seed import pathway at the time the measures were implemented in 2017. The requirement aimed to provide MPI border-operations with as much detail about imported *Petunia* seed to mitigate the risk of further entry of *Petunia* species not present in New Zealand.

30. Following successful close-out of the GM *Petunia* biosecurity response in NZ in 2018 and recall of GM *Petunia* varieties by regulatory authorities worldwide, the likelihood of introduction of GM *Petunia* into New Zealand is currently deemed to be low. Stakeholders have now suggested that it is not essential for the common name to be a mandatory specification on the phytosanitary certificate for *Petunia* seeds for sowing.

Assessment of measures

31. MPI propose to amend the specific requirements for *Petunia* on IHS 155.02.05: Seeds for Sowing to remove the requirement for phytosanitary certificates to specify the common name of *Petunia* species imported.

32. The proposed amendment is justified because removal of the common name from phytosanitary certificates does not increase the risk of introducing a new organism on the *Petunia* seeds for sowing import pathway.

(i) The full scientific name of the *Petunia* species and variety specified on phytosanitary certificates will allow MPI to assess whether the imported *Petunia* seed for sowing is a species that is present in New Zealand and listed on the Plant Biosecurity Index.

(ii) Importers are still required to provide either a GM-testing certificate or a non-GMO declaration (proposed as a measure in this consultation document), for imported *Petunia* seed for sowing. These measures enable MPI to manage GM-risk and verify compliance of imports on the pathway with the HSNO Act.

- **Amendment to the requirements for GM testing certificates for *Petunia* spp. whole plants, cuttings and tissue cultures to include genus OR species name AND a unique identifier.**

Background

33. The *Petunia* schedule of IHS 155.02.06: *Importation of Nursery Stock* was amended on 31 October 2017 to specify GM testing requirements for *Petunia* whole plants, cuttings and tissue cultures, following confirmation that *Petunia xhybrida* 'African sunset' imported into New Zealand since 2014 was a genetically modified variety.

34. Under current import requirements, *Petunia* whole plants, cuttings and tissue cultures must be sampled and tested for the presence of genetically modified sequences prior to import. A GM testing certificate showing a negative test result for the presence of GM sequences must be submitted to MPI at the time of import permit application to provide assurance that the *Petunia* variety being imported is not a new organism.

35. Currently GM testing certificates for *Petunia* whole plants, cuttings and tissue cultures are required to specify the following details:

(i) Species name
(ii) Unique identifier (e.g. variety name or lot/line number), which must be reproduced on all other import documentation to support traceability;
(iii) PCR assays used to screen for presence of GM sequences in *Petunia*.
(iv) Test results (negative result for the presence of GM material).

36. In 2019, an importer of *Petunia* plants for planting submitted a number of GM testing certificates to MPI that contained all the above information except for the species name on the certificates. The reason for this was the inability of the MPI-recognized GM testing laboratory to resolve the identity of the tested *Petunia* germplasm down to the species, although they were identified to the genus. As a result, these GM testing certificates were deemed non-compliant with the requirements of the IHS.

37. The affected importer asked MPI to reassess the requirement for the species name to be included on GM testing certificates for *Petunia* plants for planting, contending that identification of the genus of the tested plant material and a negative test result provides sufficient assurance that the imported plant is not genetically modified. They considered the requirement for the species to be identified on the GM testing certificate to pose unnecessary barriers and costs to achieving compliance.

38. After assessing the risks associated with removing species name from *Petunia* GM testing certificates, the Ornamental Plant Imports team issued a specific direction under section 27(1)(d)(iii) of the Biosecurity Act for GM testing certificates submitted by the importer with genus, unique identifier (variety name or lot/line number), assay used and negative GM test result, to be considered equivalent to current requirements for *Petunia* on IHS 155.02.06: *Importation of Nursery Stock.*

Assessment of measures

39. MPI propose to amend the GM testing certificate requirements for *Petunia* whole plants, cuttings and tissue cultures in IHS 155.02.06: *Importation of Nursery Stock* to state that certificates may show either the genus name or species name of the plant material tested and a unique identifier (variety name or lot/line number), which must be reproduced on all other import documentation to support traceability.

40. The proposed amendment is justified because removal of species name from *Petunia* GM testing certificates does not compromise MPIs ability to verify that the imported nursery stock is not a genetically modified organism.

(i) GM testing certificates identifying the plant material to genus and unique identifier number (variety name or lot/line number), assay performed and negative GM test result provides assurance that a genetically modified organism will not be imported into New Zealand in compliance with the HSNO Act 1996.

(ii) GM testing Certificates which include genus name and a unique identifier (variety name or lot/line number) reproduced on other import documentation allows traceability across all required import documents.

(iii) GM testing certificates for *Petunia* whole plants, cuttings and tissue cultures are only accepted from laboratories recognized by MPI to test for GMOs on *Petunia* species. The testing methods used at these laboratories are audited by MPI to verify compliance with the IHS and the GM Testing Protocol.

(iv) Other parts of the documentation provided with each consignment will allow verification of the name of the imported species for MPI to ensure that the imported species is one that is present in New Zealand. All imported *Petunia* whole plants, cuttings and tissue cultures are required to be labelled with their scientific name (genus and species) as per the general labelling requirements in IHS 155.02.06: *Importation of Nursery Stock* for whole plants and cuttings (section 2.2.1.3) and for tissue cultures (section 2.2.2.1).

- **Removal of the requirement for an import permit for *Petunia* tissue cultures.**

Background

41. An import permit is currently required for *Petunia* tissue cultures imported under the *Petunia* schedule of IHS 155.02.06: *Importation of Nursery Stock*. At the time of permit application, the importer is required to submit a copy of a GM testing certificate issued by an MPI-approved GM-testing laboratory confirming that the imported variety is not a new organism under the HSNO Act. An import permit is only issued for varieties which have been tested and certified as not containing unapproved GM plant material.

42. These requirements were first introduced in 2017 as part of emergency measures in the IHS to manage the risk of introduction of GMOs into New Zealand on the *Petunia* tissue culture import pathway, following a worldwide GM *Petunia* event, incursion of GM *Petunia* varieties into NZ and ensuing biosecurity response.

43. MPI is reassessing the requirement for an import permit for imported *Petunia* tissue cultures as the IHS requirement for a GM testing certificate showing that the imported tissue cultures are free of genetically modified material is considered sufficient to mitigate the risk of introduction of GM *Petunia* varieties into New Zealand and verify that imported tissue cultures are compliant with the HSNO Act.

Assessment of measures

44. MPI propose to amend the *Petunia* schedule of IHS 155.02.06: *Importation of Nursery Stock* to remove the requirement for an import permit for *Petunia* tissue cultures.

45. The proposed amendment is justified as removing the requirement for an import permit will not result in a lower level of management of GM-risk on the *Petunia* tissue culture import pathway.

(i) The requirement for importers of *Petunia* tissue cultures to provide a GM testing certificate issued by a MPI approved GM-testing laboratory showing a negative test result for presence of GM material or a non-GMO declaration (proposed as an alternative measure to manage GM-risk in this consultation document) at the New Zealand border is sufficient to manage the risk of GM *Petunia* varieties entering New Zealand. The measure will allow compliance with the HSNO Act to be assessed by MPI without need for an import permit.

(ii) The likelihood of introduction of GM *Petunia* into New Zealand is currently deemed low. The requirement for an import permit serves an operational function rather than a risk management function, therefore it is no longer considered necessary to be an IHS requirement.

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APPENDIX 2

2.7 Apiaceae

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

Approved countries: All

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

Import permit: Not required

PEQ: Not required

Phytosanitary certificate: Required

Approved treatment

If the treatment option is selected:

(1) Each seed lot must be treated using a hot water dip, for the treatment of bacterial organisms ('*Candidatus* Liberibacter solanacearum' haplotypes C, D and E) as per MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments.

(2) The hot water treatment is required to be completed offshore prior to export, or on arrival in New Zealand.

(3) Pre-export treatment for each seed lot must be endorsed by the NPPO in the treatment section on the phytosanitary certificate, where the temperature and time must be clearly stated.

Phytosanitary certificate – Additional declarations

(4) The required additional declarations must be endorsed in full on the phytosanitary certificate, no variations in the wording will be accepted by MPI, with exception of translation artifacts.

(5) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.

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

a) '*Candidatus* Liberibacter solanacearum' haplotypes C, D, and E are absent/not known to occur in _____ (name of country).

OR

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

OR

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

Testing Requirements

If the testing option is selected:

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

(8) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

(9) A representative sample of a minimum of 10,000 seeds, is required from each seed lot and tested using the real-time PCR assay described by Li *et al.*, 2009 to show the consignment is free of '*Candidatus* Liberibacter solanacearum' haplotypes C, D and E.

Guidance:

Refer section 1.11 Seeds of MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments

References:

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

2.14 *Cannabis sativa*

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

Approved countries: All

Quarantine pests: Refer to pest list for *Cannabis sativa*

Import permit: Not Required

PEQ: Not required

Phytosanitary certificate: Required

Guidance

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

Approved treatments

(10) In lieu of pest free area or pest free place of production for *Pseudomonas syringae* pv. *cannabina* and *Xanthomonas campestris* pv. *cannabis*, the *Cannabis sativa* seeds must be treated using a hot water dip (for bacteria and parasitic weed) prior to shipment, or on arrival in New Zealand;

a) hot water treatment must be conducted as per MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments.

(11) In lieu of pest free area for *Leptosphaeria woroninii*, *Septoria cannabis* and *Curvularia cymbopogonis*, the *Cannabis sativa* seeds must be treated with fungicide as per MPI Standard MPI-STD-ABTRT Approved Biosecurity Treatments.

Phytosanitary certificate - Additional declarations

(12) The exporting country NPPO must confirm any treatment(s) as required by the IHS in the disinfestation and/or disinfection treatment section.

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

"The *Cannabis sativa* seeds have been:

i) sourced from a 'pest free area' free from the named regulated bacteria (*Pseudomonas syringae* pv. *cannabina* and *Xanthomonas campestris* pv. *cannabis*)";

OR

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

OR

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

AND

"The *Cannabis sativa* seeds have been:

iv) sourced from a 'pest free area' free from the named regulated fungi (*Leptosphaeria woroninii, Septoria cannabis* and *Curvularia cymbopogonis*)";

OR

v) "treated with an approved fungicide combination in MPI approved treatments".

AND

"The *Cannabis sativa* seeds have been:

vi) sourced from a 'pest free area' free from the named regulated viruses (*Hemp mosaic virus* and *Hemp streak virus*)";

OR

vii) "sourced from a 'pest free place of production' free from the named regulated viruses (*Hemp mosaic virus* and *Hemp streak virus*)".

Guidance

Refer section 1.11 Seeds of MPI Standard MPI-STD-ATBRT Approved Biosecurity Treatments

References:

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

2.15 Capsicum

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

Approved countries: All

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

Import permit: Not required

PEQ: Not required

Approved treatment: Not required

Phytosanitary certificate: Required

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

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

a) For *Potato spindle tuber viroid* (PSTVd):

i) sourced from (country name) where *Potato spindle tuber viroid* is not known to occur."

OR

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

OR

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

b) For *Pepper chat fruit viroid* (PCFVd):

i) sourced from a 'pest free area' free from *Pepper chat fruit viroid*"

OR

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

OR

iii) sourced from a 'pest free place of production' free from *Pepper chat fruit viroid"*

OR

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

c) For *Tomato brown rugose fruit virus* (ToBRFV):

i) sourced from 'pest free area', free from *Tomato brown rugose fruit virus*".

OR

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

OR

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

2.15.2 Testing requirements

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

(3) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

(4) Testing on-shore will be performed using an MPI-approved testing method.

2.74 *Solanum lycopersicum*

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

Approved countries: All

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

Import permit: Not required

PEQ: Not required

Approved treatment: Not required

Phytosanitary certificate: Required

Phytosanitary certificate - Additional declarations

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

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

AND

b) "The *Solanum lycopersicum* seeds have been:

i) sourced from a 'pest free area' free from *Pepino mosaic virus*.

OR

ii) sourced from a pest free place of production' free from *Pepino mosaic virus*.

OR

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

AND

c) "The *Solanum lycopersicum* seeds have been:

i) sourced from a 'pest free area' free from *Potato spindle tuber viroid*.

OR

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

OR

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

AND

d) " The *Solanum lycopersicum* seeds have been:

i) sourced from a 'pest free area' free from *Tomato chlorotic dwarf viroid*.

OR

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

OR

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

AND

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

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

OR

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

OR

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

Testing requirements

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

(7) Pre-export testing for each seed lot must be endorsed by the NPPO on the phytosanitary certificate, or if tested on arrival in New Zealand, must be completed by an MPI-approved testing laboratory.

(8) Testing on-shore will be performed using an MPI-approved testing method.

2.59 *Petunia*

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

Approved countries: All

Quarantine pests: None

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

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

Approved treatment: Not required

Phytosanitary certificate: Required

Phytosanitary requirements

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

(10) The full scientific name of the Petunia species and variety must be specified on the phytosanitary certificate.

GM seed testing

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

Option 1:

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

Option 2:

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

Guidance

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

Appendix 3: Declaration Form

To be completed and signed by the exporter and importer.

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

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

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

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

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

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

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

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

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

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

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

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

Signed by **Exporter** and Company Name (details) and date	Signed by **Importer** and Company Name (details) and 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 fined not exceeding $500,000.00.

Petunia

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

GENERAL CONDITIONS:

Approved Countries: All

Quarantine Pests: *Phytophthora palmivora, Potato spindle tuber viroid*

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

A. For Whole Plants and Cuttings
Import Permit: An import permit is required.
GM Testing Certificate or Non-GMO Declaration: A copy of the GM testing certificate or signed non-GMO declaration must be submitted with the import permit application and with the imported whole plants and cuttings upon arrival in New Zealand.
PEQ: Level 2
Minimum Period: 3 months
Additional declaration:

a. Conditions for *Potato spindle tuber viroid*

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

b. Conditions for *Phytophthora palmivora*[1]
Note: Only applies to members of the *Petunia* genus

One of the following Additional Declarations must be endorsed on the phytosanitary certificate:

"The [insert species name] plants in this consignment have been sourced from [insert country name], which is free from *Phytophthora palmivora*".
OR
"The [insert species name] plants in this consignment were produced in a "pest free area" for *Phytophthora palmivora*".
OR
"The [insert species name] plants in this consignment were produced in a "pest free place of production" for *Phytophthora palmivora*".

B. For Tissue Cultures
GM Testing Certificate or Non-GMO Declaration: A copy of the GM testing certificate or signed non-GMO declaration must be submitted with the imported tissue cultures upon arrival in New Zealand.
As for **Standard Entry Conditions for Tissue Cultures** - see Section 2.2.2.
PLUS
Additional Declaration: "The cultures have been derived from parent stock sourced from a "Pest free area" or "Pest free place of production" [choose one], free from *Potato spindle tuber viroid*".
OR

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

GM Requirements for *Petunia* nursery stock

All varieties of *Petunia* nursery stock imported into New Zealand must meet one of the following requirements:

(i) A non-GMO declaration, signed by the importer and exporter, that the *Petunia* nursery stock is free from genetically modified material must be submitted (for a copy of the 'Declaration Form' refer to the end of this schedule).
OR

(ii) A copy of the GM testing certificate that confirms that the variety is not a new organism as defined by the Hazardous Substances and New Organisms Act 1996 (HSNO Act 1996) must be submitted. GM testing certificates must meet the following requirements:

Requirements for GM Testing Certificates

- Testing must occur at an MPI-approved or recognised laboratory, in accordance with the standard PIT-GMO-ALGMOT: *Approval of Laboratories for Genetically Modified Organism Testing*, and the *Protocol for Testing for the Presence of Genetically Modified Plant Material*.
- The GM testing certificate must include the genus name or species name and a unique identifier (e.g. variety name or lot/line number), which must be reproduced on other import documentation to support traceability.
- Sampling for the purposes of testing must be carried out in accordance with the Protocol for Testing for the Presence of Genetically Modified Plant Material.

Guidance:

- The Protocol, and a list of MPI-approved and recognised facilities, are on the website Genetically Modified Plant Material http://mpi.govt.nz/importing/plants/seeds-for-sowing/genetically-modified-seeds/

Declaration Form

To be completed and signed by the exporter and importer.

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

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

I,.....(*exporter's name and address*).....declare that according to the requirements set out in the Nursery Stock Import Health Standard (MPI Import Health Standard: 155.02.06: Importation of Nursery Stock - http://www.mpi.govt.nz/document-vault/1152), (*species name and lot/line number or unique identifier as stated on all the other import documentation*) was produced neither "from" nor "by" genetically modified crops.

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

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

I,..... (*importer's name and address*).....declare to the best of my knowledge that according to the requirements set out in the Nursery Stock Import Health Standard (MPI Import Health Standard: 155.02.06: Importation of Nursery Stock - http://www.mpi.govt.nz/document-vault/1152), (*species name and lot/line number or unique identifier as stated on all the other import documentation*) was produced neither "from" nor "by" genetically modified crops.

Signed by (*exporter*) and Company Name and details

(*print name*)

Date

Signed by (*importer)* and Company Name and details

(*print name*)

Warning: Any person who knowingly makes a statement of information or a declaration that is false or misleading in a material particular may on summary conviction, be sentenced to a term of imprisonment and/or fined not exceeding $500,000.00