Ministry for Primary Industries
Manatū Ahu Matua

Risk Management Proposal

Phytosanitary measures for the management of Cucumber green mottle mosaic virus on fresh pumpkin (*Cucurbita pepo*) and watermelon (*Citrullus lanatus*) fruit from Australia

Prepared for public consultation
by Horticulture Imports

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New Zealand Government

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Requests for further copies should be directed to:

Publications Logistics Officer
Ministry for Primary Industries
PO Box 2526
WELLINGTON 6140

Email: brand@mpi.govt.nz
Telephone: 0800 00 83 33
Facsimile: 04-894 0300

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Submissions

The Ministry for Primary Industries (MPI) invites comment from interested parties on phytosanitary measures for Cucumber green mottle mosaic virus (CGMMV) for fresh pumpkin (*Cucurbita pepo*) and fresh watermelon (*Citrullus lanatus*) from Australia.

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

MPI therefore seeks comment on the phytosanitary measures for CGMMV associated with fresh pumpkin and fresh watermelon from Australia. MPI has developed this proposal based on the available scientific evidence and assessment of this evidence.

The following points may be of assistance in preparing comments:

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

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

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

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

However, should you wish to forward submissions in writing, please send them to the following address to arrive by close of business on 2 May 2019.

Plant Imports
Plants & Pathways
Ministry for Primary Industries
PO Box 2526
Wellington 6140
New Zealand

Submissions received by the closure date will be considered during the amendment of the affected import health standards (IHS) which are as follows:

- Import Health Standard 152.02: *Importation and Clearance of Fresh Fruit and Vegetables into New Zealand*; and,
- Import Health Standard Commodity Sub-class: Fresh Fruit/Vegetables Watermelon, *Citrullus lanatus* from Australia.

Submissions received after the closure date may be held on file for consideration when the issued IHS are next revised/ reviewed.

Official Information Act 1982

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

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

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

1 Purpose

1. The purpose of this risk management proposal (RMP) is to:
    a. Summarise the known biosecurity risk associated with Cucumber green mottle mosaic virus (CGMMV) on fresh pumpkin (*Cucurbita pepo*) and fresh watermelon (*Citrullus lanatus*) from Australia;
    b. Outline the proposed amendments to the import requirements for fresh pumpkin and watermelon fruit from Australia for the management of CGMMV;
    c. Explain how the phytosanitary measures (i.e. pest free area and pest free place of production) manage risk and are consistent with New Zealand's domestic legislation and international obligations; and,
    d. Seek stakeholder feedback on the amendment to the import requirements for the fresh pumpkin and fresh watermelon from Australia IHS.

2 Scope

2. This RMP lists the information and processes used to assess:
    a. the existing measure (i.e. pest free area); and,
    b. whether the proposed measure (i.e. pest free place of production) is equivalent to the existing measure.

3. The draft amendment to the IHS is the subject of consultation under section 23(3) of the Biosecurity Act (1993). This RMP provides information to support the consultation on the IHS amendment but is not itself the subject of consultation. However, MPI will accept comments and suggestions on the RMP in order to improve future IHS consultations.

4. The RMP is divided into 3 parts:
    a. Part 1 provides background information to the phytosanitary measures.
    b. Part 2 outlines the context for considering the phytosanitary measures.
    c. Part 3 assesses the risk of CGMMV on fresh pumpkin and watermelon fruit from Australia, and the suitability of the phytosanitary measures to effectively manage this risk on fresh pumpkin and watermelon exported from Australia.

3 Part 1: Background

5. CGMMV is a pathogen associated with fresh pumpkin and watermelon fruit, commodities which are approved for import from Australia (MPI, 2018; MPI, 2018a; MPI, 2018b).
6. CGMMV has been detected in the following Australian states/territories: Northern Territory, Queensland and Western Australia (Australian Government, 2017).
7. In 2018, CGMMV was identified as an unmanaged biosecurity risk on fresh pumpkin and watermelon fruit from Australia. Consequently, pest free area (PFA) established in accordance with International Standard for Phytosanitary Measures (ISPM) 4**.** *Requirements for the establishment of pest free areas* was introduced as an emergency phytosanitary measure to manage CGMMV on these pathways (MPI, 2018; MPI, 2018a). MPI requires PFA for CGMMV because of the high likelihood of introduction and high impact it could have if it was introduced to New Zealand.
8. As per Article VII.6 of the International Plant Protection Convention, MPI is obligated to assess emergency phytosanitary measures as soon as possible to ensure that the continued use of the measure is justified. As part of that assessment, MPI will also consult with domestic stakeholders.
9. The Australian Department of Agriculture and Water Resources (the department) has requested that MPI consider pest free place of production (PFPP) as equivalent to pest free area (PFA) for the management of CGMMV on fresh pumpkin and watermelon fruit (Australian Government, 2018b). PFPP would be established in accordance with ISPM 10. *Requirements for the establishment of pest free places of production and pest free production sites*.

4 Part 2: Context

4.1 DOMESTIC

10. The New Zealand biosecurity system is regulated through the Biosecurity Act 1993. Section 22 of the Act describes the meaning of an IHS, and requires that the IHS specifies requirements to be met for the effective management of risks associated with importing risk goods (including plants and plant products) into New Zealand.
11. The Ministry for Primary Industries (MPI) is the government authority responsible for the effective management of risks associated with the importation of risk goods into New Zealand (Part 3, Biosecurity Act 1993).
12. MPI engages with interested parties and/or affected New Zealand stakeholders, and the exporting country requesting market access, during the development of an IHS.
13. MPI follows MPI policies and procedures for the development and consultation of an IHS.

4.2 INTERNATIONAL

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

4.3 NEW ZEALAND'S BIOSECURITY SYSTEM

16. New Zealand operates a biosecurity system for which the phytosanitary aspect (covering plant health) is a key part.
17. No biosecurity system is capable of reducing risk to zero. The objective of the system is to reduce the likelihood of entry and establishment of regulated organisms (including pests, diseases and weeds) to an acceptable level.
18. An organism is 'regulated' by MPI if it could cause unacceptable consequences (i.e. likely to cause unacceptable economic, environmental, socio-cultural or human health impacts) if it were to enter and establish in New Zealand, provided the following conditions are met:
    a. it is not present in New Zealand; or
    b. it is present but under official control in New Zealand;
    c. it is able to establish and spread in New Zealand.

    - Entry and establishment is defined as 'introduction' by the International Plant Protection Convention (IPPC).

19. The New Zealand phytosanitary system focuses on ensuring that the most significant pests, for example economically important fruit flies, are unlikely to ever establish in New Zealand. The system also manages risk associated with all regulated pests.
20. The focus of the IHS for plant-based goods is to, wherever possible, manage unacceptable phytosanitary risks identified as being associated with the goods before arrival/clearance at the New Zealand border. The expectation is that commercial consignments of plants and plant

products meet New Zealand's phytosanitary import requirements on arrival (risk is managed off-shore).

21. MPI monitors the pathway performance related to each IHS to ensure it provides the expected level of protection. This is achieved through verification and inspection activities at the border (and where possible, identification of pests detected) and audits of the export systems and critical control points contained in government-government arrangements (e.g. Bilateral Quarantine Arrangement, Export Plan, etc.).

4.4 EQUIVALENCE

22. For a phytosanitary measure to be approved by MPI as equivalent it must offer the same or greater level of protection to what it is replacing or is currently in place.
23. The assessment of any equivalence request is based on:
    a. international standards for phytosanitary measures (ISPMs); for example:
        i. ISPM 4. *Requirements for the establishment of pest free areas*;
        ii. ISPM 10. *Requirements for the establishment of pest free places of production and pest free production sites*;
        iii. ISPM 24. *Guidelines for the determination and recognition of equivalence of phytosanitary measures*;
    b. efficacy data relating to a treatment;
    c. the target pest(s); and,
    d. other relevant information (e.g. history of trade).
24. MPI must ensure that any measure approved is consistent with the Biosecurity Act 1993 and, the Sanitary and Phytosanitary Measures (SPS) agreement with regard to scientific justification, non-discrimination and offer transparency in assessment processes and decisions.

5 Part 3: Assessment

26. Technical advice on Cucumber green mottle mosaic virus on fresh cucurbit fruit from Australia has previously been undertaken and resulted in an emergency measure (i.e. pest free area) being applied to affected pathways (MPI, 2018; MPI, 2018a; MPI, 2018b).

27. Part 3 discusses the evidence to support the emergency measure and an equivalent measure (i.e. pest free place of production). The assessment information is specific to CGMMV on fresh pumpkin and watermelon fruit from Australia.

5.1 ASSESSMENT OF RISK

28. Cucumber green mottle mosaic virus (CGMMV) is a virus of concern on fresh pumpkin (*Cucurbita pepo*) and watermelon (*Citrullus lanatus*) fruit from Australia because:

    a. CGMMV has been detected in the following Australian states/territories: Northern Territory, Queensland and Western Australia (Australian Government, 2017).
    b. CGMMV is not known to be present in New Zealand (NZOR, 2011).
    c. CGMMV is associated with fresh pumpkin and watermelon fruit (MPI, 2018b).

29. Measures are justified to manage the biosecurity risk of CGMMV on the fresh pumpkin and watermelon from Australia pathways because:

    a. It is highly likely that fruit infected with CGMMV can enter New Zealand, if there are no phytosanitary measures in place to manage the risk offshore.
        i. Fruit infected with CGMMV can survive the transit to New Zealand and not be detected on arrival.
            1. Fruit can be asymptomatic (Dombrovsky *et al*., 2017); therefore, CGMMV would not be detected during visual inspection on arrival in New Zealand.
            2. CGMMV virions will be present in the flesh and seeds of infected fruit (MPI, 2018b).
            3. CGMMV virions are highly stable and can remain infectious on contaminated surfaces, such as the exterior of fruit, for long periods (Dombrovsky *et al*., 2017).

    b. There is a high potential for CGMMV to establish in New Zealand due to infected fruit's seeds, skin and flesh being discarded in compost (MPI, 2018b).
        i. Mature seeds of pumpkin and watermelon are not generally consumed and therefore, are disposed of (MPI, 2018b).
        ii. Disposed mature seeds of pumpkin and watermelon are capable of germinating and successfully growing in New Zealand (MPI, 2018b).
        iii. CGMMV is transmissible via seeds of pumpkin and watermelon (MPI, 2018b).
            1. When CGMMV-infected seeds are sown, virions from the seed coat can infect the germinating seedling via tiny wounds that form during early growth (Dombrovsky *et al*., 2017).
        iv. CGMMV virions can remain viable for up to two years in the soil; deliberate or accidental movement of infected compost, or virions carried from compost in ground water, could infect host plants in the environment (MPI, 2018b).

    c. There is a high likelihood of CGMMV spreading from infected fruit to host species present in New Zealand.

i. CGMMV is highly infectious (MPI, 2018b).
ii. CGMMV can transfer mechanically from infected imported fruit and contaminated surfaces to host plants (MPI, 2018b).
    1. Infected cucurbit crop plants or weeds could continue to spread CGMMV via tiny wounds that develop when infected plants brush against healthy plants (MPI, 2018b).
    2. Virus particle-contaminated plant debris and/or contaminated machinery, equipment, boxes, tools, hands, clothes, and shoes can infect host plants following direct contact (Dombrovsky *et al*., 2017, MPI, 2018b).

d. CGMMV would have a significant impact on the domestic cucurbit industry, if the virus were to establish in New Zealand.
    i. CGMMV may lead to a reduction in crop yield and fruit quality (Dombrovsky *et al*., 2017).
        1. Field surveys of squash plants have reported severe leaf mosaic, mottle and deformation (Ali *et al*., 2015).
    ii. The cucurbit industry has a sizable contribution to New Zealand's economy.
        2. In 2017, domestic sales values for fresh cucumbers, melons, pumpkins and squash were estimated at $20 million, $28 million, $13 million and $3 million respectively (Plant & Food Research, 2017).
        3. In 2017, export sales values (free-on-board) for fresh melons and squash were estimated at $1.2 million and $56.2 million respectively (Plant & Food Research, 2017).
    ii. Importing countries may impose additional phytosanitary measures on New Zealand cucurbits to obtain assurance that exported produce is free from CGMMV.

5.2 ASSESSMENT OF RISK MANAGEMENT

30. Pest free area (PFA) is a sufficient measure to manage the Risk Group 2 (RG2) pest CGMMV on fresh pumpkin and watermelon fruit from Australia because:

    a. The department and state governments can **establish** PFAs as per ISPM 4. *Requirements for the establishment of pest free areas* on the basis that:
        i. Monitoring surveys for CGMMV and other notifiable pests and diseases have been conducted by state officials (Australian Government, 2019).
        ii. Specific surveillance for CGMMV, including surveillance of host plants in production areas and urban/peri-urban areas, has been conducted by state officials (Australian Government, 2018a).
        iii. States have conducted targeted surveillance of any properties that have been identified as having any linkage to properties where CGMMV has been confirmed to be present (Australian Government, 2018a).
        iv. As a consequence of the surveillance activities described in 30 a. i-iii, the department and state governments have been able to limit the properties infected to the following (Australian Government, 2019a):
            1. 25 properties in Northern Territory
            2. 6 properties in Queensland
            3. 10 properties in Western Australia
        v. General surveillance is accomplished via public awareness information on CGMMV on government websites (Australian Government, 2018a).

b. The department and state governments can **maintain** a PFA as per ISPM 4 because:
    i. CGMMV is a notifiable disease and growers are required to report any suspected detections (Australian Government *et al.*, 2016).
    ii. Growers apply appropriate on-farm biosecurity procedures for control of CGMMV in accordance with guidelines in the CGMMV National Management Plan (Australian Government *et al.*, 2016).
    iii. State officials conduct regular surveys of commercial farms for a broad range of pest and diseases, including CGMMV (Australian Government, 2019).
    iv. Authorised officers conduct phytosanitary inspections of produce intended for export (Australian Government, 2018c).
        1. If any symptomatic fruit are detected, the premises from where it came from is deemed infected.
    v. There are specific import requirements for CGMMV host material into Australia (Australian Government *et al.*, 2016).
    vi. Under legislation, there are specified movement controls for plants, propagated material, growing media, farm machinery and vehicles and clothing from any property found to have CGMMV (Australian Government, 2018a).

c. The department can **verify** a PFA as per ISPM 4 on the basis that:
    i. Growers intending to export fresh cucurbit fruit to New Zealand must apply to the department for accreditation (Australian Government, 2018d).
    ii. State officials will continue to conduct monitoring surveys for CGMMV and other notifiable pests and disease (Australian Government, 2019).

31. Pest free place of production (PFPP) is a sufficient measure to manage the Risk Group 2 (RG2) pest CGMMV on fresh pumpkin and watermelon fruit from Australia because:

    a. The department and state governments can **establish** PFPPs as per ISPM 10. *Requirements for the establishment of pest free places of production and pest free production sites* because they conduct:
        i. Detection surveys for CGMMV on commercial farms throughout the growing season (Australian Government, 2019).
        ii. Specific surveys for CGMMV on commercial farms prior to harvest (Australian Government, 2019).
        iii. General surveillance via public awareness information on CGMMV on websites (Australian Government, 2018b).

    b. The department and state governments can **maintain** PFPPs as per ISPM 10 because:
        i. CGMMV is a notifiable disease and growers are required to report any suspected detections (Australian Government *et al.*, 2016).
        ii. Growers apply appropriate on-farm biosecurity procedures for control of CGMMV in accordance with guidelines in the CGMMV National Management Plan (Australian Government *et al.*, 2016).
        iii. Authorised officers conduct phytosanitary inspections of produce intended for export (Australian Government, 2018c).
            1. If any symptomatic fruit are detected, the premises from where it came from is deemed infected.
        iv. There are specific import requirements for CGMMV host material into Australia (Australian Government *et al.*, 2016).

v. Under legislation, there are specified movement controls for plants, propagated material, growing media, farm machinery and vehicles and clothing from any property found to have CGMMV (Australian Government, 2018a).

c. The department can **verify** a PFPP as per ISPM 10 on the basis that:
   i. Properties seeking PFPP certification must be assessed by state auditors for compliance with requirements for managing CGMMV (Australian Government, 2019).
   ii. Growers intending to export fresh cucurbit fruit to New Zealand must apply to the department for accreditation (Australian Government, 2018d).
   iii. State officials will continue to conduct monitoring surveys for CGMMV and other notifiable pests and disease (Australian Government, 2019).

32. Reports on changes in the distribution of CGMMV will continue to be monitored through MPI's emerging risk system.

5.3 FEASIBILITY AND PRACTICALITY OF MEASURES

33. The application of PFA and PFPP is operationally feasible in Australia for the following reasons:
    a. The department are currently operating the systems described above to establish, maintain pest freedom for CGMMV in New South Wales, Victoria and Queensland (Australian Government, 2019).

    b. The department proposed PFPP as a phytosanitary measure to manage CGMMV on fresh pumpkin and watermelon from Australia (Australian Government, 2018b).

5.4 SUMMARY

34. MPI considers pest free place of production to be an equivalent measure to pest free area to effectively manage the risk of Cucumber green mottle mosaic virus (CGMMV) on fresh pumpkin and watermelon fruit from Australia.
35. MPI proposes the following IHSs are amended to include pest free place of production in addition to pest free area as a phytosanitary measure to manage CGMMV on fresh pumpkin and watermelon:
    a. Import Health Standard 152.02: *Importation and Clearance of Fresh Fruit and Vegetables into New Zealand*; and,

    b. Import Health Standard Commodity Sub-class: Fresh Fruit/Vegetables Watermelon, *Citrullus lanatus* from Australia.
36. All measures contained in IHS are subject to regular review based on pathway compliance, emerging risk assessment, new information/intelligence, and results of audit of the Export Plan or bilateral agreement.
37. MPI monitors interceptions of all regulated pests (and hitchhikers) and the appropriateness/ effectiveness of phytosanitary measures during trade.

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