



Risk Management Proposal:

**Amendment to the import health standards for apricot,
nectarine/peach and plum from the United States of
America (State of California)**

FOR PUBLIC CONSULTATION

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Purpose

1. The purpose of this document is to:
 - Outline the proposed amendment to the import requirements for fresh apricots, nectarine/peach and plums from the United States of America (State of California), for the management of *Drosophila suzukii*; and
 - To seek stakeholder feedback on the proposed amendment to import requirements.

Background

2. In May 2010, the Ministry for Primary Industries (MPI) imposed emergency measures on fresh stonefruit imported from the United States of America (USA), State of California, to manage the risk posed by the emerging pest *D. suzukii* (Diptera: Drosophilidae) (spotted wing Drosophila). The emergency measures were a mandatory treatment of fruit either by cold disinfestation or methyl bromide fumigation.

3. The emergency measures were as follows:

Cold disinfestation where the core temperature of fruit is held continuously at one of the following temperature/time combinations before transit to New Zealand:

- 0.00°C or below for 10 days
- 0.55°C or below for 11 days
- 1.11°C or below for 12 days

OR

Methyl bromide fumigation at one of the following rates:

- 32 g/m³ for 2 hrs at 22°C and above
- 40 g/m³ for 2 hrs at 17-22°C
- 48 g/m³ for 2 hrs at 12-17°C
- 64 g/m³ for 2 hrs at 6-12°C

4. The risk posed by *D. suzukii* associated with fresh fruit from the USA was previously described in MPI's "*Pest Risk Assessment: Drosophila suzukii: spotted wing drosophila (Diptera: Drosophilidae) on fresh fruit from the USA, MPI Technical Paper No: 2012/05 June 2012*". The likelihood of entry of *D. suzukii* associated with commercially produced peaches/nectarines was assessed as "high", and "low to moderate" for commercially produced apricots, "independent of imported volumes.
5. The United States Department of Agriculture (USDA) has provided efficacy data for cold disinfestation (at a fruit pulp temperature of 0.8°C (±0.7°C) for 14 days) and methyl bromide fumigation (48 g/m³ for 2 hours at 13.9°C (±0.5°C)) to support amendments to existing emergency measures for *D. suzukii* associated with stonefruit from California.

COMMODITY DESCRIPTION

6. Fresh stonefruit for human consumption is defined as commercially produced fleshy fruits of the genus *Prunus* (Rosaceae), excluding cherries, with a hard pit (or stone) in the middle surrounding the seed and without leaves.

TRADE

7. Very low volumes of fresh apricots (*Prunus armeniaca*) are imported into New Zealand from California, USA between April and July, moderate volumes of nectarines/peaches (*P. persica*)

between May and early November and low volumes of plums (*P. salicina*) between late June and October annually (Table 1).

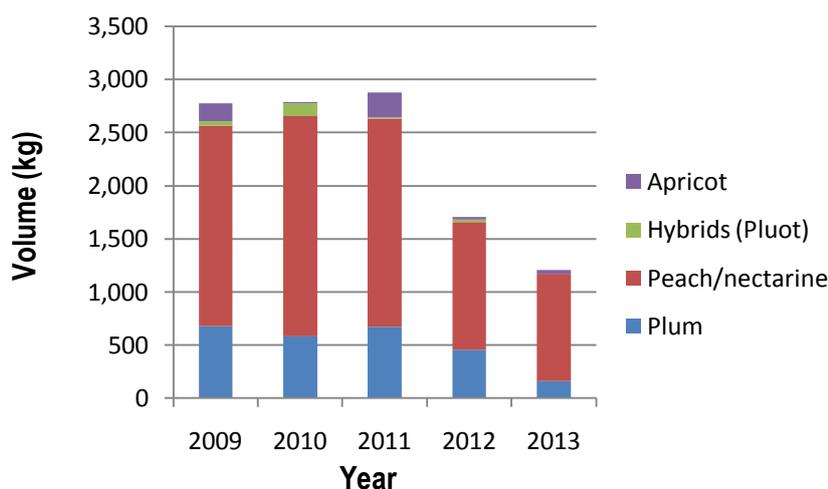


Table 1: Volume of fresh stonefruit (excluding cherries) imported into New Zealand from the USA since 2009 (Source: MPI Quancargo imports database).

8. The import of fresh stonefruit from California is counter-seasonal with New Zealand production.

INTERNATIONAL SETTING

9. 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.
10. 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.
11. Emergency measures are temporary in their application (ISPM 13: *Guidelines for the notification of non-compliance and emergency action*, 2001). As a contracting party to the SPS Agreement and the International Plant Protection Convention¹ (IPPC), MPI, as New Zealand's National Plant Protection Organisation (NPPO), undertakes to ensure that modifications (amendments) to phytosanitary measures are made promptly as a result of new or updated scientific information (Article VII.2(h), IPPC 1997; ISPM 1: *Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade*, 2006) while taking into account domestic legislation (Biosecurity Act 1993, Section 24B(1)(a)).

Objective

12. The objective of the proposed measures are to effectively manage the biosecurity risk of *Drosophila suzukii* associated with the importation of fresh stonefruit from the USA (State of California) in a way that is consistent with New Zealand's domestic legislation (Biosecurity Act 1993) and international obligations.

¹ The SPS Agreement identifies the IPPC as the organization providing international standards for phytosanitary measures.

Assessment

13. The data provided to MPI by the USDA were assessed against the elements described in the International Standard for Phytosanitary Measures (ISPM) 28: *Phytosanitary treatments for regulated pests* (2007).
14. Information supporting the USDA's proposed amendments to the methyl bromide fumigation and cold disinfestation schedules for *D. suzukii* associated with California apricots, nectarine/peach and plum is:

Experimental insects

15. Colonies of *D. suzukii* used in methyl bromide fumigation and cold disinfestation experiments were:
 - a) Established from wild specimens captured in California cherry orchards combined with flies caught in raspberry fields in Oregon;
 - b) Replenished with wild flies captured in California raspberry fields twice yearly to ensure genetic variability;
 - c) Reared on a cornmeal-(dextrose or sucrose)-agar-yeast medium and provided with an aqueous solution of sucrose;
 - d) Experimental colonies were reared and incubated at 27°C ($\pm 1.0^\circ\text{C}$), 80% $\pm 2\%$ relative humidity and 16:8 light: dark photoperiod. Likewise, infested control fruit, pre- and post-treated infested fruit were incubated using the above parameters.

Determination of the most tolerant fruit fly species and life stage

16. The most cold tolerant life stage of *D. suzukii* was determined to be 48-96 hour old larvae.
17. The most methyl bromide tolerant life stage of *D. suzukii* was determined to be third instar larvae (approximately 60-108 hour old at fumigation).

Experimental fruit and infestation

18. Stonefruit (white fleshed peaches, yellow fleshed nectarines and plums) used in the experimental trials were overripe, of commercial export size, grade and variety. Apricots were not used in trials.
19. A piece of fruit skin was removed to expose a small area for puncturing the flesh in order to facilitate oviposition during a 48-hour period.

Treatment efficacy

20. Nectarines, peaches and plums were removed from commercial packaging and exposed to adult females for oviposition. The fruit was then held for the appropriate amount of time to ensure the most tolerant life stages were present. Infested fruit was returned to commercial packaging for experimental trials.
21. Untreated controls were used to estimate the number of individuals treated during methyl bromide fumigation and cold disinfestation trials.
22. *Methyl bromide fumigation*
 - a) Methyl bromide fumigation at 48 g/m³ for 2 hours at 13.9°C ($\pm 0.5^\circ\text{C}$) resulted in no survivors of an estimated total of 49,780 $\pm 1,636$ *D. suzukii* larvae infesting nectarines and peaches;

- b) Methyl bromide fumigation at 48 g/m³ for 2 hours at 13.9°C (±0.5°C) resulted in no survivors of an estimated total of 38,334 ±1,640 *D. suzukii* larvae infesting plums.
23. *Cold disinfestation*
- a) Treatment at a fruit pulp temperature of 0.8°C (±0.7°C) for 14 days resulted in no survivors of an estimated total of 36,288 ±1,048 *D. suzukii* larvae infesting peaches;
- b) Treatment at a fruit pulp temperature of 0.8°C (±0.7°C) for 14 days resulted in no survivors of an estimated total of 33,138 ±925 *D. suzukii* larvae infesting plums;
- c) Treatment at a fruit pulp temperature of 0.8°C (±0.7°C) for 14 days resulted in no survivors of an estimated total of 38,772 ±789 *D. suzukii* larvae infesting nectarines.
24. No trials were conducted using *D. suzukii* infested apricots. However, MPI has a high level of confidence that treatment parameters can be effectively applied to apricots because:
- a) The close similarities in skin and flesh characteristics of apricots to other stonefruits; in particular plums, to which apricots are most closely related;
- b) The consistency in efficacy of the two treatments to peaches, nectarines and plums;
- c) The poorer host status of apricots to *D. suzukii*. That is, the ‘low to moderate’ likelihood of entry of *D. suzukii* associated with commercially produced apricots compared with the ‘high’ likelihood for peaches and nectarines (MPI 2012).

Feasibility & practicality of measures

25. The USA has been exporting methyl bromide fumigated and cold disinfested stonefruit from California to New Zealand since emergency measures were introduced for *D. suzukii* in May 2010. Therefore, the USA has the processes and systems established for these treatment types.
26. The proposed treatments are supported by commercial pest management practises, official verification activities and post-inspection product security.

Proposed IHS requirements

27. Based on the above evaluation, the following amendment to the import health standards for apricot, nectarine/peach and plum (Commodity Sub-Class: Fresh Fruit/ Vegetables) from California for the management of *D. suzukii* is proposed:

DROSOPHILA SUZUKII MEASURES FOR APRICOT, NECTARINE/PEACH AND PLUM FROM THE STATE OF CALIFORNIA, USA

Measure	Specification
Methyl bromide fumigation	Methyl bromide fumigation at 48 g/m ³ or greater for 2 hours at 13.9°C or greater
Cold disinfestation	The fruit pulp temperature to be held continuously at or below 0.8°C (±0.7°C) for 14 days

28. No change to the additional declarations for phytosanitary certificates is proposed.
29. MPI will continue to monitor stonefruit pathways from California to ensure compliance with the proposed measures and absence of live *D. suzukii*.

References

Biosecurity Act 1993.

<http://www.legislation.govt.nz/act/public/1993/0095/latest/DLM314623.html>

IPPC 1997. International Plant Protection Convention.

ISPM 1 2006. Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade.

ISPM 13 2001. Guidelines for the notification of non-compliance and emergency action.

ISPM 28 2007. Phytosanitary treatments for regulated pests.

MPI 2012. Pest Risk Assessment: *Drosophila suzukii*: spotted wing drosophila (Diptera: Drosophilidae) on fresh fruit from the USA, MPI Technical Paper No: 2012/05 June 2012.

MPI 2013. Standard 152.02: Importation and clearance of fresh fruit and vegetables into New Zealand. <http://www.biosecurity.govt.nz/files/ihs/152-02.pdf>

WTO 1995. Sanitary and Phytosanitary Agreement, Full Text. Online: www.WTO.Org/English/Tratop_E/Sps_E/Spsagr_E.Htm