Ministry for Primary Industries
Manatū Ahu Matua

Risk Management Proposal

Review and amendment of the Import Health Standard for Vehicles, Machinery and Tyres

FOR PUBLIC CONSULTATION

September 2015

New Zealand Government

Growing and Protecting New Zealand

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SUBMISSIONS

The Ministry for Primary Industries (MPI) invites comment from interested parties on the proposed amendments to the Import Health Standard: *Vehicles, Machinery and Tyres* and the associated draft Guidance Document. The proposed changes are supported by this discussion document.

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 seeks comment on the proposed amendments to the IHS: *Vehicles, Machinery and Tyres*. MPI has developed this proposal based on best available scientific evidence and assessment of this evidence. If you disagree with the measures proposed to manage the risks, please provide either data or published references to support your comments. This will enable MPI to consider additional evidence which may change how risks are proposed to be managed.

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.

The amendments proposed in this document are intended to update the IHS to ensure that the biosecurity risks associated with the importation of vehicles, machinery and tyres is managed in response to changing scientific knowledge and commercial practices.

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: standards@mpi.govt.nz, however, should you wish to forward submissions in hard copy format (writing), please send them to the following address to arrive by close of business on the **6 November 2015.**

Biosecurity and Environment Group
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Submissions received by the closure date will be considered during the development of the final versions of the standard and guidance document. Submissions received after the closure date may be held on file for consideration when the standard and guidance document are subsequently reviewed.

OFFICIAL INFORMATION ACT 1982

Please note that submitted documents are public information. These documents may 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 personal information to be withheld. Any decision to withhold information requested under the OIA is reviewable by the Ombudsman.

Contents

INTRODUCTION

PURPOSE

1. The purpose of this document is to:
   - clarify the proposed amendments to the requirements for the IHS: *Vehicles, Machinery and Tyres – VEHICLE-ALL*;
   - provide justification for the proposed amendments and how they manage risk;
   - seek feedback on the proposed amendments to importing requirements;
   - seek feedback on the ability of the Guidance Document to provide information on how to meet the requirements of the IHS.

BACKGROUND

2. MPI is reviewing all standards and guidance documents so that the legal requirements are clear and that information is consistently presented and easy to understand.
3. The amendments resulting from the review of the *IHS: Vehicles, Machinery & Tyres* (hereafter referred to as the IHS), are intended to effectively manage regulated pests and contamination associated with the import of vehicles, machinery and tyres. The amendments are also intended to be efficient and provide appropriate options for risk management prior to export and, where applicable, on-arrival in New Zealand.

CONTEXT

International

4. The WTO and SPS Agreements set in place rules that protect each country's sovereign right to take the measures necessary to protect the life or health of its people, animals, and plants while at the same time facilitating trade. It embodies and promotes the use of science-based risk assessments to manage the risks associated with the international movement of goods.

5. "The SPS Agreement will continue to guide how New Zealand sets standards and makes decisions related to biosecurity. In particular, it will be important to maintain the standards of transparency and scientific rigour required by the SPS Agreement, and to make decisions as quickly as possible. This will encourage other countries to comply with the rules of the SPS Agreement, and also demonstrate that New Zealand's strict controls are justified to countries that challenge them." Balance in Trade [online reference ISBN 978-0-478-33881-2].

Domestic

6. The New Zealand biosecurity system is regulated through the Biosecurity Act 1993. Section 22 of the Act describes an import health standard (IHS) and requires all risk goods (including inanimates such as Vehicles, Machinery and Tyres) entering New Zealand to be covered by one.

7. The Ministry for Primary Industries (MPI) is the government authority responsible for maintaining biosecurity standards for the effective management of risks associated with the importation of risk goods into New Zealand (Part 3, Biosecurity Act 1993).

8. MPI is committed to the principles of transparency and evidence-based technical justification for all phytosanitary measures, new and amended, imposed on importing pathways.

SUMMARY OF BIOSECURITY RISK

9. The biosecurity risk associated with vehicles and machinery was documented in the vehicles and machinery import risk analysis in 2007 (MAF 2007). The risk analysis demonstrated that many different pests and types of contaminants are associated with vehicles and machinery.

10. The main conclusions from the risk analysis (MAF 2007) were:
    i. biosecurity risk depends on the locations and conditions where vehicles and machinery are used and stored prior to export;
    ii. used vehicles are a higher biosecurity risk than new vehicles;
    iii. vehicles and machinery are a higher risk than other "inanimate" cargo such as shipping containers. This is because:
        - the complex construction of vehicles and machinery creates more habitats for pests and makes inspection and cleaning more difficult;
        - vehicles and machinery usually remain permanently in New Zealand and are used well outside the main MPI surveillance networks. This increases the likelihood of pests establishing in New Zealand if they arrive on vehicles and machinery.

Brown marmorated stink bug

11. The main change in the level of biosecurity risk associated with the import of vehicles, machinery and tyres since 2007 has been the spread of brown marmorated stink bug (BMSB, *Halyomorpha halys*) in the United States of America (USA). Over the last decade, BMSB has spread and become a major agricultural pest in the USA. BMSB has the potential to become a serious problem in New Zealand due to biology, phenology and current global distribution (MPI 2012).

12. The biosecurity risk of BMSB was documented in a pest risk analysis in 2012 (MPI 2012). Vehicles and machinery were identified as a likely pathway of entry. The risk analysis concluded that the use of visual inspection alone has limited effectiveness for detecting mobile or hidden organisms associated with vehicles and machinery. However, vehicles and machinery were not identified as a higher risk than other inanimate commodities until late 2014, when large numbers of BMSB were detected arriving in New Zealand on vehicles imported from the USA. The large numbers of detections resulted from BMSB reaching large populations in areas where vehicles were being manufactured (StopBMSB 2015).

PROPOSED AMENDMENTS TO THE IHS

Format Changes

13. The IHS has been revised and migrated into the new MPI Requirements & Guidance format to improve layout, consistency and to clarify legal requirements.

14. The Guidance Document has similarly been revised to assist the reader in understanding the amended requirements and how they are to be applied.

Measures

15. The following major amendments to the IHS are proposed to manage changes in biosecurity risk:
    A. new pre-export treatment requirements for brown marmorated stink bug associated with vehicles and machinery from the USA during a defined risk period;
    B. mandatory offshore processing of used vehicles shipped as break bulk from Japan;
    C. amended offshore requirements for used agricultural, forestry and horticultural vehicles and machinery.

A Brown Marmorated Stink Bug Requirements

16. The current treatment requirements are:
    - Methyl bromide fumigation at 48 g/m^3 for 24 hours at 10-15°C; or
    - Methyl bromide fumigation at 40 g/m^3 for 24 hours at 15-21°C; or
    - Sulfuryl fluoride fumigation at 40 g/m^3 for 24 hours at 16-20°C; or
    - Sulfuryl fluoride fumigation at 32 g/m^3 for 24 hours at 21-25°C; or
    - Heat treatment at 60°C for 10 minutes for vehicles weighing less than 3,000kg; or
    - Heat treatment at 60°C for 20 minutes for vehicles weighing more than 3,000kg (in the coldest location).

Proposed Amendments

17. MPI proposes to amend the treatment requirements for all vehicles and machinery from the USA (new and used) for the management of BMSB. The proposed treatment options are as follows:
    i. Methyl bromide fumigation at 48 g/m^3 for 24 hours at 10-15°C with a 30% end point reading (note: *no change*); or
    ii. Methyl bromide fumigation at 16g/m^3 for 12 hours at 15°C or greater with a 50% end point reading; or
    iii. Sulfuryl fluoride fumigation at 16 g/m^3 for 12 hours at 10°C or greater with a 50% end point reading; or
    iv. Heat treatment at 50°C or greater for 20 min for vehicles weighing **less than** 3,000 kg; or
    v. Heat treatment at 50°C or greater for 30 min for vehicles weighing **more than** 3,000 kg (temperatures are to be measured in the coldest location).

18. In addition, the post treatment storage period is proposed to be increased from 72 hours to 96 hours.

19. Treatment options will be removed from the IHS and incorporated into the Schedule of Approved Treatments (http://www.biosecurity.govt.nz/border/transitional-facilities/bnz-std-abtrt).

20. Also, MPI proposes that the treatment for vehicles and machinery from the USA (new and used) will only be required for the risk period from the 1st of September to the 30th of April. These dates apply to the date of shipping from the USA.

Treatment Efficacy

21. The treatment rates required for BMSB in the current IHS were based on an existing treatment schedule covering a wide range of pests associated with vehicles. However, recent research provided by the United States Department of Agriculture, Agricultural Research Service (USDA-ARS) and the Virginia Institute of Technology has determined that BMSB is susceptible to lower doses of both sulfuryl fluoride and methyl bromide and lower heat treatment temperatures. The evidence supporting lower treatment rates has been reviewed by MPI (2015b) and is summarised below.

Methyl bromide fumigation

22. No data were supplied for doses of methyl bromide at temperatures less than 15^{o}C. Therefore, the existing treatment rate (48 g/m^3 for 24 hours) will apply for treatments at 10-15^{o}C until new data are supplied.

23. However, USDA-ARS (Walse unpublished data) demonstrated statistically that commercial fumigation of the most tolerant 2nd-3rd instars of BMSB with methyl bromide at 16g/m^3 for 12 hours at 15°C or greater was highly efficacious (probit 9) (MPI 2015b).

24. Temperature is known to be an important factor in influencing the action of fumigants (FAO 1984). Therefore, the proposed reduction in fumigant dose [of methyl bromide at 15°C or greater] is consistent with increased temperature at which it is applied.

Sulfuryl fluoride

25. The USDA-ARS (Walse unpublished data) have similarly demonstrated statistically that commercial sulfuryl fluoride fumigation at 16 g/m^3 for 12 hrs at 10°C or greater with a 50% end point reading (i.e. minimum of 8g/m^3 remaining) was highly efficacious against adult BMSB (probit 9).

Heat Treatment

26. Virginia Institute of Technology (Kuhar & Aigner in publication) research showed 100% mortality of BMSB adults exposed to 50°C for ≥15 minutes or, 45°C for ≥1 hour during laboratory trials. The efficacy of the 50°C for ≥15 minutes treatment was confirmed by commercial trials of vehicles. Therefore, the heat treatment trials showed that temperature can be reduced from 60°C to 50°C and still achieve effective control of BMSB.

27. However, a 33% margin has been added by MPI to the proposed schedule time to manage the inconsistencies in heating rates within vehicles. This margin is based on experiences in New Zealand whereby larger mass has been found to be more difficult to heat.

28. Based on this 33% margin, the recommended schedule is 50°C for 20 minutes in the coldest location for vehicles weighing less than 3,000 kg and 50°C for 30 minutes in larger vehicles and machinery. The most common import from the USA are new SUVs that weigh less than 3,000 kg.

Post Treatment Storage Period

29. The post treatment storage period has been increased to reflect the overwintering period of BMSB. BMSB generally remain inactive unless temperatures increase.

30. The information for BMSB responses to temperature was reviewed by MPI (2015a). The main points supporting an increase in post-treatment storage period from this review are:
    i. daytime temperatures of a sustained average of 15°C are sufficient for activity of BMSB;
    ii. BMSB does not fly at night at temperatures below an average of 21°C;
    iii. a post treatment period of 96 hours is considered to pose little risk of re-contamination during winter conditions at USA ports.
    iv. It is recommended that separation is maintained between treated and untreated goods, or treated goods and potential infestation sources such as vegetation.

Approved Biosecurity Treatment Schedule

31. MPI is standardising the location for biosecurity treatments into a single location for easy access for stakeholders, treatment applicators and MPI officers. Offshore (pre-export) and onshore treatments will reside in the 'Approved Biosecurity Treatment Schedule' (at: (http://www.biosecurity.govt.nz/border/transitional-facilities/bnz-std-abtrt). The approved biosecurity treatment schedule will be incorporated by reference into the IHS to ensure the treatments remain legal requirements for importing.

32. The new location for biosecurity treatments will allow for a single point of information access, alignment of requirements and a consistent approach to reviews and updates.

Seasonal Measures

33. MPI imposed emergency measures for BMSB associated with vehicles and machinery from the USA in late December 2014. These measures were in response to large numbers of stink bugs detected on vehicles imported from the USA.

34. At the time the measures were imposed it was recognised that there was a higher risk period during the New Zealand spring and summer, and conversely a much lower risk period during the New Zealand winter. The dates when risk level changed were not known and the emergency measures were applied indefinitely.

35. The evidence for the risk across seasons has been reviewed and is documented by MPI (2015a). The evidence is summarised below.
    i. The seasonal behaviour of BMSB means that it is likely to arrive during the period from September to April, and unlikely to arrive from May to August.
    ii. BMSB feeds, shelters and breeds on host plants during the summer season. During this time it is not likely to occur on vehicles and machinery, except for short periods while moving between host plants.
    iii. BMSB aggregates and finds overwintering locations in the northern hemisphere during autumn (fall) in response to day-length cues. During autumn and winter, large groups of BMSB occur together in sheltered locations.
    iv. This aggregating behaviour results in large numbers of bugs sheltering in the structure of vehicles and machinery, as well as other locations such as warehouses.

36. New Zealand and Australian interception records indicate that the majority of bugs arrive on inanimate items during the northern hemisphere autumn and winter period (September to April) thus supporting the above biological information. In contrast, very few BMSB have ever been

intercepted in New Zealand or Australia during the northern hemisphere spring and summer period (May to August).

37. Environmental conditions in New Zealand mean that BMSB is likely to establish in New Zealand if it arrives from around September to April, and is unlikely to establish from May to August (MPI 2015a). BMSB arriving from September to April will encounter environmental conditions (warmer temperatures and longer day lengths) that signal the end of diapause and initiate reproductive maturation.

38. BMSB that arrive from May through to the end of August in New Zealand are unlikely to survive as they will encounter short days and low temperatures. Additionally, the range of suitable feeding structures (ripe fruit) on host plants will be less abundant (MPI 2015a).

B Used Vehicle Shipped as Break Bulk from Japan

Proposed Amendment

39. MPI proposes that all used vehicles shipped as break bulk from Japan will require processing through offshore MPI approved systems.

Mandatory Offshore Processing

40. The rationale for requiring offshore treatment for all used vehicles shipped as break bulk from Japan is:
    i. 95% of used vehicles imported to NZ are from Japan;
    ii. the vehicles and machinery import risk analysis (MAF 2007), showed that "used vehicles are a higher risk than new vehicles";
    iii. the Japan used-vehicle import pathway exposes NZ to the majority of the biosecurity risks associated with vehicles (including Asian Gypsy Moth, ants and other significant biosecurity risks);
    iv. the import of used cars from Japan continues to be managed as a high risk pathway. It is currently managed almost completely by offshore MPI approved systems already which has proven to be the most successful way to manage the risk in this major pathway for imported vehicles;
    v. under the offshore systems, vehicles are cleaned and inspected offshore. A proportion of the vehicles arriving are re-inspected by MPI to verify that the management offshore is effective.

41. Five to 10% of used vehicles from Japan are shipped to New Zealand without going through an MPI approved system and are inspected on arrival at dedicated transitional facilities either on or near ports. Many require cleaning in New Zealand and a number of these vehicles have arrived containing high risk mobile pests. Although the pests are found during MPI inspection on arrival, it is difficult to manage the risk of mobile pests on vehicles at the port when vehicles are coming in large numbers and are not containerised.

42. This proposal will prevent uncleared contaminated used vehicles from Japan arriving in New Zealand and keep significant risk offshore. The used-vehicle import industry systems already in place in Japan are tried and tested.

43. A mandatory requirement for offshore processing for all break bulk used vehicles from Japan will ensure that an acceptable and consistently high level of biosecurity outcome is achieved.

C Used Agricultural, Forestry and Horticultural Vehicles and Machinery

Proposed Amendment:

44. MPI proposes that all used agricultural, forestry and horticultural vehicles and machinery, from all countries, must be thoroughly cleaned prior to export, offshore.

45. The proposed requirement will need to be supported by evidence showing that offshore cleaning meets MPI's requirements.

Mandatory Offshore Cleaning of All Used Vehicles

46. Significant numbers of used agricultural, forestry and horticultural vehicles and machinery arrive in New Zealand with extensive contamination. Some of these vehicles appear clean, but partial dismantling reveals high risk material such as pine needles and soil.

47. The IHS currently requires that used vehicles arrive in New Zealand as clean and free of contamination. However used agricultural, forestry and horticultural vehicles and machinery continue to arrive in New Zealand carrying biosecurity contamination (*see examples below*) and causing major disruptions to importers, shippers, ports and MPI.

48. Under the current IHS, MPI has the ability to re-ship those units that are grossly contaminated but this has been an inefficient and reactive way to manage the biosecurity risks. A requirement to provide evidence of offshore cleaning is expected to encourage more proactive communication prior to shipping and reduce the likelihood of grossly contaminated used agricultural, forestry and horticultural vehicles being shipped to New Zealand.

Revisions to the Guidance Document

49. The guidance document provides importers and other affected stakeholders with explanatory information, options and expectations to assist them in meeting the requirements of the IHS: *Vehicles, Machinery and Tyres*. It also gives information about the actions MPI may undertake to verify compliance or deem necessary to manage the risk.

50. The Guidance Document outlines the accepted processes and procedures that supply-chain parties should follow to manage biosecurity risk organisms and contamination associated with vehicles, machinery and tyres.

51. In order to clarify the requirements in the IHS, some text from the guidance document has been moved to the standard. In addition, the structure has been revised to separate the general requirements from the specific requirements.

52. The biosecurity requirements that have been moved or clarified include:
    a. Section 2.4, which describes three options for clearance that can be applied to all vehicles, machinery and tyres.
    b. The requirement that vehicles, machinery and tyres must be “clean” has been clarified by describing specific criteria. Section 2.3 of the IHS describes the biosecurity contaminants and contaminant threshold levels. This information was previously in the guidance document.
    c. Specific Requirements for high risk categories have been moved to the IHS as they are a mandatory requirement that must be met when importing specified types of vehicles, machinery & tyres into New Zealand (Section 3 of the IHS).

REFERENCES

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MPI 2015a. Technical advice on the establishment potential of Brown marmorated stink bug in the New Zealand autumn/winter period. Technical advice.

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