



Risk Management Proposal

Used Equipment Associated with Animals or Water

2016

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1 Purpose

- (1) The purpose of this document is to:
 - a) Summarise the biosecurity risks associated with the importation of used equipment associated with terrestrial and aquatic animals and activities related to these animals.
 - b) Show how options for the management of risk organisms have been assessed.
 - c) Provide recommendations for the import requirements for the import health standard (IHS) *Used Equipment Associated with Animals and Water* (ANIEQUIP.ALL). [Formerly ANIEQPIC.ALL]

2 Background

- (1) The IHS *Used Equipment Associated with Animals and Water* (ANIEQPIC.ALL dated 1 May 2010) outlines the requirements for the importation of used equipment that has been in contact with terrestrial and aquatic animals.
- (2) Border inspectors have noted discrepancies in the treatment requirements between the IHS: ANIEQPIC.ALL, the relevant live animal IHSs and the MPI *Approved Biosecurity Treatment* (MPI-STD-ABTRT dated 12 July 2012) standard, making it confusing as to which set of requirements should be applied.
- (3) These standards were reviewed and aligned to provide consistency in the management of biosecurity risks associated with used equipment.
- (4) An import risk analysis (IRA) specific to used equipment associated with animals or water is not available. The risk management measures in the amended IHS: ANIEQUIP.ALL are based on IRAs for the relevant commodities (where available). These IRAs were reviewed in the context of determining which diseases could be transmitted via contact with used equipment (i.e. fomites).
 - a) MPI IRA: *Guinea Pigs (Cavia porcellus) from Australia* (dated March 2014).
 - b) MPI IRA: *Cats, Dogs and Canine Semen* (dated 2 November 2009).
 - c) MPI IRA: *Cattle from Australia, Canada, the European Union and the United States of America* (dated 13 February 2009).
 - d) MPI IRA: *Llamas and Alpacas from Specified Countries* (dated 14 December 2010).
 - e) MPI IRA: *Horses and Horse Semen* (20 January 2000).
 - f) MPI IRA: *Hides and Skins from Specified Animals* (dated April 2008).
 - g) MPI IRA: *Chicken and Duck Meat for Human Consumption* (dated August 2013).
- (5) A copy of these IRAs can be found at the following MPI website:
<http://www.mpi.govt.nz/importing/overview/import-health-standards/risk-analysis/>.

3 Objective

- (1) The objective is to manage all biosecurity risks posed by the import of used equipment associated with animals and water, consistent with New Zealand's domestic legislations and international obligations.

4 Commodity Scope

- (1) For the purposes of this IHS, used equipment is broadly defined to include any used equipment that has been in contact with terrestrial or aquatic animals where such used equipment may act as a vehicle for transmitting biosecurity risk organisms. Used equipment includes those:
 - a) Accompanying an animal being imported into New Zealand (e.g. worn on animal, inside or attached to container transporting the animal).
 - b) In personal effects (e.g. luggage, shipping containers, mail).
 - c) For commercial fishing activities.

5 Proposed Risk Management Measures

- (1) The current IHS: ANIEQPIC.ALL separates terrestrial animals into two broad categories:

- a) Terrestrial animals (not including equine animals and birds) which encompass small pets (chinchillas, guinea pigs, rabbits, etc.), companion animals (dogs and cats) and farm animals (ruminants, lamoids, and pigs).
 - b) Equine animals (e.g. horses, donkeys, mules) and birds.
- (2) The IHS: ANIEQPIC.ALL outlines the biosecurity requirements for used equipment and references the MPI-STD-ABTRT for treatment options. When treatment options have been derived from formal risk analyses, the RMP proposes to relocate treatment options (where appropriate) from MPI-STD-ABTRT to the amended IHS: ANIEQUIP.ALL to allow for ongoing assessment and amendment by the Animal Imports team.
 - (3) Additionally, the RMP proposes to separate treatment options for equine animals and birds as biosecurity measures for the two groups are sufficiently different to warrant two distinctive sets of requirements.
 - (4) No bedding accompanying an animal was permitted under the IHS: ANIEQPIC.ALL. No changes are proposed for the amended IHS: ANIEQUIP.ALL other than for small pets and birds. The RMP proposes that bedding accompanying small pets and birds be eligible for biosecurity clearance with the animals when the animals have also been given biosecurity clearance. Biosecurity clearance of the animals will ensure no additional biosecurity risk will be posed by biosecurity clearance of their bedding.
 - (5) Regarding used bee equipment, only uncapping knives were eligible for import in the IHS: ANIEQPIC.ALL. The RMP proposes that no used bee equipment be eligible for import. This will be reviewed in the future when import requirements for bee products are consulted.

5.1 Terrestrial animals other than equine animals and birds

5.1.1 Existing requirements in IHS: ANIEQPIC.ALL

- (1) The eligibility requirements for used equipment associated with terrestrial animals are:
 - a) Used equipment must be clean; and
 - b) Used equipment associated with alpacas, llamas, cattle, buffalo, pigs, sheep and goats containing absorbent material (e.g. rope halters) must be completely dry; and
 - c) No ticks or fleas are found on the used equipment.
- (2) The treatment options in MPI-STD-ABTRT are:
 - a) Cleaned to remove any visible contamination; and
 - b) Treated with a disinfectant listed in MPI *List of Approved Disinfectants for General Transitional Facilities for Uncleared Goods*.

5.1.2 Discussion: Small pets

- (1) Only weeds/ weed seeds were identified as a potential hazard in the IRA: *Guinea Pigs (Cavia porcellus) from Australia*.
- (2) Biosecurity risks associated with the importation of chinchillas and rabbits are similar to those of guinea pigs.
- (3) The RMP proposes that bedding accompanying guinea pigs, chinchillas and rabbits is eligible for biosecurity clearance with the animals when the animals have been given biosecurity clearance.

5.1.3 Discussion: Companion animals

- (1) Bedding accompanying companion animals is ineligible for import under the IHS: *Cats, Dogs and Canine Semen*. The following discussion relates only to used equipment imported as personal effects, i.e. excludes bedding accompanying companion animals.
- (2) Used equipment that is commonly imported in personal effects includes pet beds, toys and grooming items. They often do not meet the IHS: ANIEQPIC.ALL due to contamination with hair or fur. Additionally they often contain fabric that may be difficult to disinfect once the hair or fur is removed.
- (3) The requirement for disinfection following hair removal may be unnecessary as only two biosecurity risk organisms, *Brucella* spp, and *Leptospira* spp, are able to transmit via fomites (IRA: *Cats, Dogs and Canine Semen*). *Brucella* spp are self-limiting in dogs; whereas *Leptospira* spp is unlikely to transmit via completely dry used equipment.
- (4) The current treatment by a disinfectant for used equipment associated with companion animals imported as personal effects may be an unnecessary burden on border staff and cost to importers. The RMP proposes that when the used equipment associated with companion animals imported as personal effects is contaminated only with hair or fur, treatment with a disinfectant is not required.

5.1.4 Discussion: Farm animals

- (1) Of the potential hazards identified in the IRAs *Cattle from Australia, Canada, the European Union and the United States of America* and *Llamas and Alpacas from Specified Countries*, the only biosecurity risk organisms which could potentially be transmitted via fomites are Borna Disease, foot and mouth disease (FMD), *Brucella* spp, *Pasteurella multocida*, *Salmonella* spp, *Leptospira* spp, *Chlamydomphila* spp, *Coxiella burnetii* (Q fever). Of these diseases, the most highly contagious and economically devastating biosecurity risk organisms would be FMD virus. FMD virus may be infective for several weeks and possibly longer in dried organic material and animal secretions or chemically inert material such as hair. However, completely dry material is not likely to harbour FMD as the virus is sensitive to desiccation³. Although the IRAs do not address inactivating agents effective against FMD virus, the MPI *List of Approved Disinfectants for General Transitional Facilities for Uncleared Goods* evaluated and approved selected disinfectants with respect to FMD, swine vesicular disease and poultry diseases. The treatment measures in the current IHS: ANIEQPIC.ALL are considered appropriate and no change is recommended.

5.1.5 Recommendations

For bedding accompanying guinea pigs, chinchillas and rabbits

- (1) Bedding accompanying guinea pigs, chinchillas and rabbits is eligible for biosecurity clearance with the animals when the animals have been given biosecurity clearance.

For used equipment (excluding bedding accompanying animals) associated with terrestrial animals other than equine animals and birds

- (2) It must be:
 - a) Clean, completely dry, free from ectoparasites and free from visible contamination; or
 - b) Imported on or with an animal that has been given biosecurity clearance.
- (3) If used equipment is not free from ectoparasites, it must be treated in accordance with the MPI *Approved Biosecurity Treatment* (MPI-STD-ABTRT) standard.
- (4) Used equipment that is wet and/or visibly contaminated must be treated in the following manner:
 - a) Washed or cleaned to remove visible contamination; and
 - b) Treated with a disinfectant listed in MPI *List of Approved Disinfectants for General Transitional Facilities for Uncleared Goods* (Note: Used dog or cat equipment contaminated only with hair or fur is exempted from this requirement).

5.2 Equine animals and birds

5.2.1 Existing requirements in IHS: ANIEQPIC.ALL

- (1) The requirements for equine animals and birds are:
 - a) The used equipment must be clean; and
 - b) The used equipment must be treated on arrival; or
 - i) The used horse equipment is imported from Australia.
- (2) The treatment options in MPI-STD-ABTRT are:
 - a) Thoroughly cleaned by washing with soapy water, standard detergents or approved disinfectant; or
 - b) Heat treated at 60°C for at least 10 minutes; or
 - c) Fumigated with 37% formalin at 20ml/m³ and 16g potassium for eight hours at Atm, 18°C, 80-90% humidity.

5.2.2 Discussion: Equine animals

- (1) From the IRA: *Horses and Horse Semen*, potential hazards transmitted via fomites are equine influenza (EI), vesicular stomatitis (VS), horse pox and glanders. EI is highly contagious; however, the virus does not survive long outside the host (e.g. up to 24-48 hours on nonporous surfaces and 8-12 hours on cloth and paper) and is sensitive to detergents and disinfectants due to its lipid envelope.⁴
- (2) VS virus may survive for six days (dried) at ambient temperatures and is sensitive to common detergents and disinfectants. Though horse pox virus may be transmitted via fomites, the IRA: *Hides and Skins from Specified Animals* concluded that horse pox is not considered a potential hazard as it causes a rare disease

that may no longer exist. The bacterium causing glanders does not survive long outside the host being destroyed by direct sunlight within a day and is sensitive to most disinfectants.

- (3) The current temperature and time combination outlined in MPI-STD-ABTRT should be sufficient to inactivate VS.⁵ EI virus is inactivated when heated to a temperature of 50°C for 30 minutes or by exposure to sunlight (15°C for 15 minutes).⁴ Outside the host, the bacterium causing glanders shows little resistance to drying, heat and light and survival beyond two weeks is unlikely.⁶ Given that VS, EI and glanders are likely to be inactivated with moderate heating, no change to the heating treatment is proposed.
- (4) All of the equine organisms identified above are sensitive to treatment with formaldehyde disinfection.^{4, 5, 7}
- (5) Given that these organisms may not survive long under clean and dry conditions at room temperature, it is proposed that clean and completely dry used horse equipment which has been stored for at least six weeks be exempt from treatment on arrival into New Zealand. Six weeks is an average period of time for personal effects to arrive via sea freight.

5.2.3 Discussion: Birds

- (1) Newcastle disease (ND), avian influenza (AI), infectious bursal disease (IBD), duck hepatitis, water fowl parvoviruses, and Marek's disease (MD) virus may potentially be transmitted via fomites (*IRA Chicken and Duck Meat for Human Consumption*).
- (2) The OIE Terrestrial Animal Health Code (the *Code*, 2016) Chapter 6.4 *Biosecurity Procedures in Poultry Production* recommends cleaning and disinfection procedures for poultry houses and equipment to be done in accordance with Chapter 4.13 *General Recommendations on Disinfection and Disinsection*, that is, thorough washing to physically remove contaminants followed by treatment with a disinfectant. The RMP proposes that the treatment requirements for used bird equipment be amended to align with the *Code's* recommendations.
- (3) The current temperature and time combination (i.e. 60°C for 10 minutes) outlined in MPI-STD-ABTRT is not sufficient to inactivate some bird diseases such as IBD virus. IBD is highly contagious and may remain infective for long periods of time in poultry houses and equipment. It is proposed that the heat treatment option for used bird equipment be removed from MPI-STD-ABTRT as achieving an appropriate heat treatment would be difficult.
- (4) The *IRA: Hides and Skins from Specified Animals* assessed the susceptibility of poultry pathogens to formaldehyde disinfection and concluded that these organisms are likely to be sensitive to formaldehyde.
- (5) No biosecurity risk is associated with used bird equipment when the bird has been given biosecurity clearance.

5.2.4 Recommendations

For used equine equipment

- (1) Used equipment from Australia must be:
 - a) Free from ectoparasites (e.g. fleas, ticks), clean and free from visible contamination.
- (2) Used equipment from countries other than Australia must be:
 - a) Free from ectoparasites (e.g. fleas, ticks), clean and free from visible contamination; and
 - b) Meet one of the following conditions:
 - i) Evidence (e.g. date consignment delivered to freight agency) showing that the used equipment has been in transit for at least 6 weeks to New Zealand and has not come into contact with any equine animals during transit, or has been stored for at least 6 weeks and has not come into contact with any equine animals during storage.
 - ii) Treated in accordance with 5.2.4 (4).
- (3) If used equipment is not free from ectoparasites, it must be treated in accordance with the *MPI Approved Biosecurity Treatment* (MPI-STD-ABTRT).
- (4) Used equipment that is wet and/or visibly contaminated must be:
 - i) Washed thoroughly using a standard detergent; or
 - ii) Cleaned and treated with a disinfectant listed in the MPI List of Approved Disinfectants for General Transitional Facilities for Uncleared Goods; or
 - iii) Fumigated with 10% formaldehyde (approximately 30% formalin) for 8 hours; or

- iv) Heated to a temperature of at least 60°C for at least 10 minutes.

For used bird equipment

- (5) Used equipment associated with birds must be:
 - a) Free from ectoparasites (e.g. fleas, ticks), clean and free from visible contamination; and
 - b) Treated in accordance with 5.2.4 (7); or
 - c) Imported on or with a bird (e.g. crate used to transport bird) that has been given biosecurity clearance.
- (6) If used equipment is not free from ectoparasites, it must be treated in accordance with the MPI *Approved Biosecurity Treatment* (MPI-STD-ABTRT).
- (7) Used equipment that is wet and/or visibly contaminated must either be:
 - a) Thoroughly washed using a standard detergent and treated with a disinfectant listed in the MPI List of Approved Disinfectants for General Transitional Facilities for Uncleared Goods; or
 - b) Fumigated with 10% formaldehyde (approximately 30% formalin) for 8 hours.

5.3 Veterinary kits associated with equine animals

5.3.1 Existing requirements in IHS: ANIEQIC.ALL

- (1) The requirements for veterinary kits associated with equine animals are:
 - a) The veterinary kit must be clean; and
 - b) The veterinary kit is imported from Australia; or
 - i) The veterinary kit is treated on arrival.

5.3.2 Discussion

- (1) Veterinary kits which are not eligible for clearance, or where clearance is not requested by the importer, may be held by MPI for at least 48 hours before the kits may leave New Zealand (from all countries) or as required (from Australia).
- (2) This time period was implemented in 2010 in response to border staff seeking advice on the minimum stand down period for veterinary kits which arrive with horses going into post-arrival quarantine (non-Australian) and where the kits are being re-used on horses for export from New Zealand. These kits would not be subject to inspection by border staff if biosecurity clearance is not requested. The concern would be iatrogenic or mechanical transfer of risk organisms through used medical equipment (needles, syringes, etc.) or opened medications (liquid, multiple dose drugs).
- (3) The time period reflects the risk associated with EI. EI virus survives outside the host for up to 24-48 hours on nonporous surfaces and 8-12 hours on cloth and paper.
- (4) Equine infectious anaemia (EIA) virus may survive on contaminated needles for up to 4 days (IRA Horses and Horse Semen). It is unclear whether EIA was considered in the advice to border staff.

5.3.3 Recommendation

- (1) No change is proposed for veterinary kits other than treatment measures as outlined in clause 5.2.4 (4).

5.4 Aquatic (marine or freshwater) animals or aquatic activities

5.4.1 Existing requirements in IHS: ANIEQIC.ALL

- (1) The requirements for used equipment associated with marine and freshwater aquatic animals or marine and freshwater activities are:
 - a) The used equipment must be clean; and
 - b) All parts of the used equipment must be completely dry on arrival.

5.4.2 Discussion

- (1) Except used equipment associated with commercial fishing activities, the biosecurity risks associated with used aquatic equipment which is clean and completely dry is assessed as negligible.

5.4.3 Recommendations for used aquatic equipment

- (1) The used equipment must be clean and free from visible contamination and completely dry.
- (2) Used equipment associated with commercial fishing activities must also be treated as per the MPI *Approved Biosecurity Treatment* (MPI-STD-ABTRT) standard.
- (3) Used aquatic equipment that is wet and/or visibly contaminated must be treated as per the MPI *Approved Biosecurity Treatment* (MPI-STD-ABTRT) standard.

¹ The Center for Food Security and Public Health (Iowa State University - <http://www.cfsph.iastate.edu/Factsheets/pdfs/leptospirosis.pdf>).

² The Merck Veterinary Manual (http://www.merckmanuals.com/vet/generalized_conditions/leptospirosis/overview_of_leptospirosis.html).

³ Australian Veterinary Emergency Plan: Foot and Mouth Disease 2014 (<http://www.animalhealthaustralia.com.au/wp-content/uploads/2011/04/FMD-22-FINAL25Jun14.pdf>).

⁴ Australian Veterinary Emergency Plan 2011: Equine Influenza (<https://www.animalhealthaustralia.com.au/download/2526/>)

⁵ Australian Veterinary Emergency Plan 1996: Vesicular Stomatitis (<https://www.animalhealthaustralia.com.au/download/2592/>)

⁶ OIE Terrestrial Manual 2013: Glanders (http://www.oie.int/fileadmin/Home/FR/Health_standards/tahm/2.05.11_GLANDERS_FINAL.pdf)

⁷ Colorado State University: *Burkholderia mallei*

(http://www.ehs.colostate.edu/WHO/SP/illness_Policy_Info_Emergency_Response_Packets/Agent_Fact_Sheets/Burkholderia_mallei_Fact_Sheet.pdf).