Australian Government
Department of Agriculture, Water and the Environment

Ministry for Primary Industries
Manatū Ahu Matua

Schedule of aircraft disinsection procedures for flights into Australia and New Zealand

This Schedule gives effect to the approved aircraft disinsection methods and procedures for flights arriving into Australia and New Zealand through:

- adoption of the World Health Organization (WHO) aircraft disinsection methods and procedures[1] as the base standard
- additional requirements for Australia and New Zealand detailed in this document including *points of difference* for hold treatments
- use of the Aircraft Disinsection Information (ADI) database
- use of prescribed disinsection certificate templates available within this document
- other information relevant to biosecurity controls, measures and compliance standards for Australia and New Zealand

The Schedule must be read in conjunction with the World Health Organization (WHO) aircraft disinsection methods and procedures as the standard for Australia and New Zealand. Any specific information contained in this Schedule is to be taken to override the World Health Organization (WHO) aircraft disinsection methods and procedures for aircraft operators to comply with disinsection requirements.

Australia Only: This will define the aircraft disinsection methods approved by the Director of Human Biosecurity, Department of Health under the *Biosecurity Regulation 2016* section 7 (2).

Version 5.2

[1] WHO Aircraft Disinsection Methods and Procedures: https://www.who.int/publications/i/item/9789240014459

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Version control

Updates will occur automatically on the Department of Agriculture, Water and the Environment and the Ministry for Primary Industries websites and this page will summarise the amendments as they occur.

Version	Date	Author	Description of change	Sections
1.0	1998	AQIS/MAFBNZ	First issue	all
2.0	October 2009	DAFF	Review	all
2.1	December 2010	AQIS/MAFBNZ	Review	all
2.2	September 2012	DAFF/MPI	Review	all
3.0	May 2013	DAFF	Update of links	all
3.1	December 2013	Department of Agriculture	Branding update Inclusion of $40 fee Timing requirements to update ADI	all 2.1, 3.1 2.1, 3.1
3.2	March 2014	Department of Agriculture/MPI	Inclusion of how to appropriately treat the flight deck Inclusion of Supervision/conducting of treatment by officer	3.1–10 4.1–10 6.1–11 1.5, 6
4.0	June 2016	Department of Agriculture and Water Resources	Branding update Review of contents for accuracy and consistency under the *Biosecurity Act 2015*	all
4.1	February 2017	Department of Agriculture and Water Resources	Aligned residual and pre-embarkation ADI update timeframe to 1 hour Inclusion of Airbus 380 Removal of exemption Changes to the retention request for top of descent certificates Passenger exemption Review of full document to adhere to accessibility requirements	1.1, 1.3, 1.4, 2.1, 2.2 2.4 3 3.1 5 all
4.2	March 2018	Department of Agriculture and Water Resources	Link to WHO IPCS Report of the information consultation on aircraft disinsection	Disinsection aerosols
4.3	September 2019	Agriculture and MPI	Update Department name throughout Time Zone advice Electronic Certificates advice Aircraft delays advice Added - Airbus A380 Pre-flight spray Added - Airbus A380 Top of descent spray Amended - words table 25	 1.1 P3,1.5, 2.3,3.2 2.4, 3.1 Table 22 Table 23 Table 25
4.4	20 February 2020	Department of Agriculture, Water, and the Environment and MPI	Aircraft delays Table updates to residual method regarding cleaning practices	

Version	Date	Author	Description of change	Sections
			Updated departments name.	
5	2 July 2021	Department of Agriculture, Water and the Environment and MPI	New Schedule incorporating the World Health Organization (WHO) aircraft disinsection methods and procedures as the base standard. Additional requirements for Australia and New Zealand detailed in this document - including points of difference and other information relevant to biosecurity controls, measures and compliance standards for Australia and New Zealand This will define the legally approved methods.	All
5.1	26 July 2021	Department of Agriculture, Water and the Environment and MPI	Inconsequential amendments made as supported by Department of Health.	2 2.1 3 3.1
5.2	1 October 2021	Department of Agriculture, Water and the Environment and MPI	Update to New Zealand Ministry for Primary Industries section for aircraft arriving from Antarctica into New Zealand. Further amendments made to sections supported by Department of Health and Ministry of Health.	4.1.3

Introduction

This Schedule has been prepared by the Australian Department of Agriculture, Water and the Environment (the department) and the New Zealand Ministry for Primary Industries (MPI) for the alignment of disinsection procedures for aircraft flying into Australia and New Zealand. These are additional requirements to the recommendations within the World Health Organization (WHO) aircraft disinsection methods and procedures.

The following are the points of difference that Australia and New Zealand authorities require, over and above those recommended by the WHO:

1. Aircraft hold (cargo areas) disinsection rates are higher than those recommended by the WHO and are listed in the Spray rates listing for flights into Australia and New Zealand published by the department, on behalf of Australia and New Zealand
2. Holds (cargo areas) must be treated with either residual permethrin treatment or the combination aerosol (Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%)).
3. The use of disinsection treatment certificates as outlined within the appendix section of this schedule
4. The required use of the Aircraft Disinsection Information (ADI) database for airlines and aircraft operators on an approved arrangement with the department or a compliance agreement with MPI

The department and MPI work in partnership in managing Australian and New Zealand aircraft disinsection requirements and compliance. This includes recognition of each other's disinsection arrangements (Australia) /agreements (New Zealand), and any other undertakings as required.

Australian Government Department of Agriculture, Water and the Environment

The Australian Government Department of Agriculture, Water and the Environment (the department) plays an essential role in maintaining Australia's animal, plant and human health status. The department is responsible for reducing the risk to agricultural industries and the environment posed by exotic pests and diseases.

The department administers human biosecurity functions on behalf of the Department of Health including the screening of arriving passengers for Listed Human Diseases (LHD), surveillance activities relating to aircraft disinsection and vector monitoring.

Biosecurity controls at Australia's borders are governed by the *Biosecurity Act 2015*. These controls aim to minimise the risk of exotic pests and diseases entering Australia and help protect our agriculture export industries as well as our environment, tourism industries and lifestyle.

Under Section 204A of the *Biosecurity Act 2015*, the operator of an incoming aircraft must take measures to control or destroy insect vectors of human diseases that have a potential to cause, directly or indirectly, an LHD, and may exist in or on the aircraft or goods in or on the aircraft. These measures must be carried out in a manner and at a time or within a period, approved by the Director of Human Biosecurity.

Note: This *Schedule of aircraft disinsection procedures for flights into Australia and New Zealand (Version 5.2)* is effective from 2 August 2021 and will void any previous versions.

Airlines will need to ensure that products used in Australia are registered by the Australian Pesticide and Veterinary Medicine Authority (APVMA). This may affect spray on arrival aircraft or aircraft that have not met Australia's disinsection requirements and are required to perform spray on arrival under supervision of departmental officers.

New Zealand Ministry for Primary Industries

The Ministry for Primary Industries (MPI) is charged with the leadership of Biosecurity New Zealand. It encompasses facilitating international trade, protecting the health of New Zealanders and ensuring the welfare of its environment, flora and fauna, marine life and Maori resources.

MPI incorporates Biosecurity New Zealand, Border Clearance Services which is the first line of defence for reducing risk to New Zealand's natural resources, plants, animals and people from exotic pests and diseases.

The various biosecurity controls in place across New Zealand's borders are mandated by the *New Zealand Biosecurity Act 1993*, the *New Zealand Health Act 1956* and the *Health (Quarantine) Regulations 1983.* These controls are administered by MPI and the New Zealand Ministry of Health.

Disinsection is undertaken to prevent the introduction and spread of unwanted insect pests (many of which are also vectors of human, animal and plant diseases). The disinsection of aircraft to specifically control vectors of human diseases (such as mosquitoes) is carried out on behalf of New Zealand's Ministry of Health. **Note**: Due to the absence of mosquitoes in Antarctica, disinsection is not required for flights arriving in New Zealand which originate from Antarctica.

Airlines will need to contact MPI to ensure product acceptance in New Zealand. Disinsection products used within New Zealand must also be registered with the Environmental Protection Agency (EPA) New Zealand.

Certification of disinsection treatments applied to aircraft

The airline operator is responsible for ensuring that a certificate detailing the cabin and hold treatment is completed by an appropriately trained person and for airlines using the can method, that the fully or partly used cans remain on-board until the intended destination is reached.

All sections of the certificate must be accurately completed in English and any amendments to the original certificate issued may only be made and authorised by the person who originally issued/signed the certificate. Incorrect information must only be ruled through once and be initialled by the original issuer.

Note: the use of correction fluid, or any other method of removing the original certified information, to make it illegible, is not acceptable and will void the certificate.

Certificates must be held on-board (hardcopy or electronic) with the exhausted or partly used cabin and hold cans to be made available by cabin staff on request of a biosecurity officer in Australia or New Zealand for assessment. If electronic certificates are used, airlines must carry a device that can access and display the certificate for that aircraft and flight.

Hold cans are permitted to remain in the hold for collection by ground crew and presentation to a biosecurity officer on arrival.

Failure to comply with the department or MPI disinsection requirements prior to arrival will result in spray on-arrival being conducted prior to the commencement of passenger disembarkation, cargo and baggage discharge (and granting of pratique in Australia).

Airline and aircraft operators must use the certification requirements available as per below appendix links in this document:

- Appendix A – Residual Disinsection Certificate
- Appendix B – Pre-embarkation Disinsection Certificate
- Appendix C – Pre-departure Disinsection Certificate

Airlines and aircraft operators are free to add headers, footers or serial numbers to the certificates, but the details within the box on the certificates must not be amended.

Multiple certificates will be required when an aircraft's cabin and hold have been treated using different methods (e.g., Cabin Pre-embarkation method and Holds Residual method)

Australia Only:

- Pratique controls (Negative Pratique) and restrictions will apply for aircraft arriving with:
  - Incorrect / incomplete disinsection certification
  - incorrect method/procedures used in applying disinsection treatment
- Biosecurity officers will remain on board the aircraft to supervise the spray on arrival disinsection treatment.

New Zealand Only:

Quarantine officers will remain on board to conduct/supervise the spray on arrival disinsection treatment.

Aircraft Disinsection Information (ADI) database

The Aircraft Disinsection Information (ADI) database is a system available for airlines holding a current and valid approved arrangement (the department) or compliance agreement (MPI) to provide up-to-date aircraft disinsection certification information electronically for border authorities about aircraft disinsection arriving into Australia and New Zealand.

The ADI is owned and controlled by the department in collaboration with MPI. The department grants access to the ADI once an airline enters into an approved arrangement (the department) or compliance agreement (MPI). Access to the ADI is limited to airlines and their authorised users only.

For compliance assessment by the department or MPI for aircraft arrival, it is the airlines responsibility to:

- update ADI aircraft/flight information at least one hour prior to the aircraft scheduled arrival at its first port of landing in Australia or New Zealand.
- ensure the information certified in ADI is based on treatments approved and correctly applied in accordance with the airline's approved arrangement or compliance agreement conditions.
- ensure that the information entered in ADI is true, correct and supported by copies of relevant certification.

Time Zone – Residual updates:

If the residual treatment is current at time of departure for a flight to Australia or New Zealand however expires in flight, the port of arrival will consider this compliant.

Australia Only:

Airlines and aircraft operators on an approved arrangement with the department that fly into Australia will incur a fee for service charge if they fail to update ADI as above.

Approval process to perform residual or pre-embarkation disinsection methods

Approval to perform residual or pre-embarkation disinsection methods is dependent on airlines entering into an approved arrangement with the department or a compliance agreement with MPI. These arrangements and agreements outline the application of a particular set of procedures; and the supervision, monitoring and testing of the airline's compliance with those procedures. Airlines must contact either the department or MPI for further details.

Department of Agriculture, Water and Environment

To apply for an approved arrangement with the department, specific requirements must be met as outlined in the "applying for an approved arrangement" section of the department's website.

The requirements for treatment of international aircraft by disinsection to prevent the introduction of potential disease vectors and harmful pests are outlined in the "requirements for operating approved arrangements for class 43.1" section of the department's website.

Note: Airlines and aircraft operators who contract a third-party provider as a treatment applicator must have a Contract of Service included into their Approved Arrangement with the department.

Airline and aircraft operators who have signed a Contract of Service with a third-party provider prior to 30 August 2019 must contact the department at arrivals@awe.gov.au to request an updated version of the Contract of Service which allows for electronic certificates.

MPI

To apply for a compliance agreement with MPI, please contact:

- disinsectionmatters@mpi.govt.nz

Conditions for arrival into Australia

International aircraft arriving into Australia who have **failed to comply with the department's disinsection treatment requirements,** in accordance with the World Health Organization (WHO) aircraft disinsection methods and procedures and this Schedule, must:

1. Submit a **pre-arrival report (PAR)** to a biosecurity official at the arriving airport, advising that disinsection of the aircraft has not been completed, prior to arrival. In the event the operator of an aircraft cannot make direct contact with the department, he/she must ensure their Ground Handling Agent or the Air Traffic Controller at the relevant airport contacts the department and reports the prescribed information prior to the aircraft arrival. The operator of an aircraft must also report any changes to the above information.

2. Where the above circumstance is reported, the aircraft will not have positive pratique (negative pratique conditions and restrictions apply) which will require:
    a. all passengers and crew, baggage and cargo must remain on board the secured aircraft on arrival; and
    b. on-arrival disinsection treatment to be completed under supervision of a biosecurity officer; and
3. Upon completion of the on- arrival disinsection treatment, the biosecurity officer may then grant pratique allowing disembarkation of passengers and discharge of goods to commence.

A fee for service charge will be incurred by airline operators for these non-compliant flights arriving into Australia.

Biosecurity Officers in Australia may meet aircraft on arrival to verify disinsection certificates and aerosol cans or to complete disinsection treatment testing for compliance assessment. Engagement with airline or aircraft operator representatives may occur if any delays are expected.

Note: *Failure to comply may be an offence and penalties may apply for providing false or misleading information – including for Australia civil penalties, may impact on the airline's approved arrangement status and/or result in conditional restriction, suspension, or revocation of airline access to ADI.*

1 Residual cabin and hold disinsection

Airlines and aircraft operators may only undertake residual disinsection of their aircraft after they have entered into an arrangement or agreement with either the department or MPI, see Approval process for more information.

It is the airline and aircraft operators responsibility to ensure ADI database has been updated accordingly, see ADI database for more information.

1.1 Procedures for residual cabin and hold treatments

Please refer to the World Health Organization (WHO) aircraft disinsection methods and procedures for residual cabin and hold treatment procedures.

1.2 Certification for residual cabin and hold treatments

The applicator is responsible for ensuring that a certificate detailing the treatment is completed for each section of the aircraft that has been treated, the aircraft operator must ensure it is available on request on arrival in Australia or New Zealand.

Airline and aircraft operators must use the residual disinsection certification requirements detailed in Appendix A.

Australia Only:

- The aircraft operator must retain a copy of the certificate for a period of 12 months.
- Airlines and aircraft operators who contract a third-party provider as a treatment applicator must have a Contract of Service included into their Approved Arrangement with the department.

2 Pre-embarkation cabin disinsection

Airlines and aircraft operators may only undertake pre-embarkation cabin treatment of their aircraft after they have entered into an arrangement with the department or agreement with MPI, see Approval process for more information.

If the holds (cargo areas) do not have a residual treatment, then they must be treated with an aerosol spray. Please refer to Section 4 Hold (Cargo areas) aerosol disinsection of this document for more information.

It is the airline and aircraft operators responsibility to ensure ADI database has been updated accordingly, see ADI database for more information.

2.1 Procedures for pre-embarkation cabin treatments

Please refer to the World Health Organization (WHO) aircraft disinsection methods and procedures for pre-embarkation cabin treatment procedures and cabin aerosol spray rates list.

For single flights, pre-embarkation treatment must be carried out at the departing port before departing to Australia or New Zealand.

For multi-stop flights, pre-embarkation treatment must be carried out at the last overseas port before departure to Australia or New Zealand. All transit passengers must disembark the aircraft for the duration of the pre-embarkation treatment.

2.2 Certification for pre-embarkation cabin treatments

The applicator is responsible for ensuring that a certificate detailing the treatment is completed for each section of the aircraft that has been treated.

Airline and aircraft operators must use the pre-embarkation disinsection certification requirements detailed in Appendix B.

The aircraft operator must ensure disinsection certificate is available on request and retain a copy of the certificate for a period of 12 months.

The exhausted or partly used cans for the treatment conducted, must be carried on-board the aircraft, should verification by an officer upon arrival be required.

Australia Only:

- Airlines and aircraft operators who contract a third-party provider as a treatment applicator must have a Contract of Service included under their Approved Arrangement with the department.

3 Pre-departure cabin disinsection

Airlines and aircraft operators may undertake the pre-departure disinsection method of the aircraft without entering into an arrangement with the department or an agreement with MPI.

Prior to commencing use of this method, aircraft operators are required to contact the department or MPI. This is to confirm correct documented procedures are in place to ensure compliance is met for pre-departure cabin treatment procedures.

If the holds (cargo areas) do not have a residual treatment, then they must be treated with an aerosol spray. Please refer to Section 4 Hold (Cargo areas) aerosol disinsection of this document for more information.

3.1 Procedures for pre-departure cabin treatments

Please refer to the World Health Organization (WHO) aircraft disinsection methods and procedures for pre-departure cabin treatment procedures and cabin aerosol spray rates list.

For single flights, pre-departure treatment must be carried out at the departing port before departing to Australia or New Zealand.

For multi-stop flights, pre-departure treatment must be carried out at the last overseas port before departure to Australia or New Zealand.

3.2 Certification for pre-departure cabin treatments

The applicator is responsible for ensuring that a certificate detailing the treatment is completed. The certificate for pre-departure cabin disinsection must be carried on-board the aircraft and made available to be sighted by an officer upon arrival.

The exhausted or partly used cans for the treatment conducted, must be carried on-board the aircraft, and will be collected by an officer upon arrival.

Airline and aircraft operators must use the residual disinsection certification requirements detailed in Appendix C.

Australia only:

- On arrival, all exterior doors, and windows, including hold doors must remain closed and only be opened once a biosecurity officer has given approval.
- After the certificate has been sighted by an officer, the airline must keep the certificate for a period of 12 months.

New Zealand only:

- On arrival, all exterior doors, and windows, including hold doors must remain closed and only be opened once granted by an officer.
- The certificates and cans will be collected by an officer upon arrival.

4 Hold (cargo areas) aerosol disinsection

Aircraft hold (cargo areas) aerosol disinsection rates are higher than those recommended by the WHO for international aircraft arriving into Australia & New Zealand.

Hold (cargo areas) aerosol disinsection must be performed in conjunction with cabin disinsection with procedures outlined in below tables:

- Table 1 - Procedures for lower cargo hold treatments
- Table 2 - Procedures for lower cargo hold when small mammals are to be loaded
- Table 3 - Procedures for freighter cargo hold treatments

For on arrival hold (cargo areas) disinsection information, please refer to:

- the Spray rates listing for flights into Australia and New Zealand for the spray amounts required for each aircraft type.
- Table 4 - On-arrival Hold procedures for on arrival spray processes

4.1.1 Table 1 - Procedures for lower cargo hold treatments

Step	Action
1	Spraying must be carried out manually at the last departure airport after all cargo has been loaded and just before the cargo hold door is closed.
2	Aerosols must be discharged into each cargo hold in such a manner as to ensure that all parts of the cargo hold have been disinsected.
3	Spraying must be completed with a single-shot aerosol can with a vertical ejection nozzle containing Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%)
4	Advise the crew that the cargo hold is about to be sprayed. As it is not uncommon for cargo hold spray to set off smoke detectors, sensitive electronic equipment must not be directly sprayed, and the crew must be fully aware of the procedures before disinsection.
5	During disinsection and for 5 min after completion of spraying, the aircraft's air-conditioning must remain off. Recirculation fans may be left on if essential for operation of the aircraft but should be set to the lowest rate.
6	When the lower cargo door(s) are being closed, leave the door open no more than 30 cm to place the aerosol(s) in a secure, upright position, and activate the lock-down nozzle(s).
7	Once the spray aerosol(s) appears to be functioning correctly, immediately close the hold door to complete disinsection. If either hold requires re-opening (except for the purpose of loading animals) or an aerosol malfunctions, the above steps must be repeated.
8	Full discharge of the aerosols takes 2 min, and the saturation period takes another 5 min.
9	Used aerosol containers should remain in the lower holds and should be retrieved by ground handlers at the destination airport. They should be accessible to the ground handlers.
10	If an airline chooses to remove aerosol containers before departure, the containers should be carried on board with the disinsection certificate.
11	Allow 7 min after activation before retrieval.
12	The door of the disinsected cargo hold must be opened only to the minimum necessary to retrieve used containers and then immediately closed to avoid recontamination.
13	Any non-compliance with procedures should be reported to the intended first port before arrival

4.1.2 Table 2 - Procedures for lower cargo hold when small mammals are to be loaded

Step	Action
1	Disinsection should be conducted before the mammals are loaded but after all other cargo.
2	Consideration should be given to procedures of the International Air Transport Association for animals (Chapter 5) and the regulations of the World Organisation for Animal Health.
3	Follow steps in Table 1
4	Allow 7 minutes after activating aerosols before loading animals
5	Open the hold door after disinsection to load animals and close it immediately afterwards to avoid recontamination.

4.1.3 Table 3 - Procedures for freighter upper cargo area treatments

Step	Action
1	Spraying must be carried out manually at the last departure airport after all cargo has been loaded.
2	For the upper cargo deck of a freighter spraying must be completed with a single-shot aerosol can with a vertical ejection nozzle containing Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%)
3	When there is also a cargo area on the main deck (freighter aircraft), this area should be accessed for spraying via the passenger access door after the large cargo door is closed.
4	Discharge the aerosols while walking away from the spray and vacate the area once spraying has been completed.
5	Spray should be discharged as high as possible and directed towards the centre of the aircraft ceiling by an operator walking at approximately one step per second.
6	If cargo prohibits access to certain parts of the aircraft: • discharge the aerosol into the centre of aircraft, directed towards the ceiling above the top of the cargo, for the appropriate duration for the section of the aircraft that could not be accessed; or • position the aerosols evenly throughout the aircraft on top of the cargo and then activate the single shot aerosols.
7	Once spraying is completed, allow at least 5 min for the spray to settle before departure.

4.1 Certification for hold (cargo areas) treatments

The applicator is responsible for ensuring that a certificate detailing the treatment is completed. The certificate for the hold disinsection and the exhausted or partly exhausted cans must be carried on-board the aircraft and made available to an officer on request upon arrival.

The certification requirements are detailed in Certification of disinsection treatments applied to aircraft. Use Appendix B or Appendix C depending on which cabin treatment method is selected.

5 On-arrival cabin and hold disinsection

5.1 On-arrival cabin procedures

The reasons for a required on-arrival cabin disinsection treatment to take place, the procedures and cabin aerosol spray rates list that need to be followed are found in the World Health Organization (WHO) aircraft disinsection methods and procedures.

Australia Only:

- Aircraft that have not completed disinsection prior to arrival, aircraft operators must submit a PAR in accordance with section 193 of the Biosecurity Act 2015 and Biosecurity Regulation 47 (2) and (4) – (7).
- Pratique controls (Negative Pratique) and restrictions apply for arrival of aircraft in Australia.

5.2 On-arrival hold procedures

If an on-arrival hold disinsection treatment is required to take place, the following table outlines the procedures that will need to be followed.

5.1.1 Table 4 – On-arrival procedures for lower cargo hold treatments

Step	Action
1	Under no circumstances should a hold door be opened without the presence or approval of a biosecurity officer.
2	Aerosol cans must be discharged into each hold in such a manner as to ensure that all parts of the holds have been disinsected.
3	Spraying must be completed with a single-shot aerosol can with a vertical ejection nozzle containing Permethrin 2% and d-Phenothrin 2% (1*R*-*trans*-phenothrin 2%)
4	Prior to carrying out the hold disinsection advise the crew that the cargo hold is about to be sprayed. As it is not uncommon for cargo hold spray to set off smoke detectors, sensitive electronic equipment must not be directly sprayed, and the crew must be fully aware of the procedures before disinsection.
5	During disinsection and for a period of five minutes after completion of the spray, the aircraft's air-conditioning must be switched off. Recirculation fans may be left on if essential to the operation of the aircraft but set at the lowest flow rate.
6	Disinsection may be carried out manually by directing the spray into the small pressure hatches or by placing the cans inside the hold.
7	To place the cans inside the hold, open the lower cargo door(s) no more than 30 cm, place the aerosol(s) in a secure, upright position, and activate the lock-down nozzle(s).
8	Once the spray aerosol(s) appears to be functioning correctly, immediately close the hold door to complete disinsection. If either hold requires re-opening or an aerosol malfunctions, the above steps must be repeated.
9	Allow two minutes for the cans to fully discharge and then wait a further five minutes for the saturation period before the holds can be opened.
10	Remove the exhausted cans.
11	When satisfied that the procedure has been carried out, the officer will permit the unloading of cargo.

Table 5 – Procedures for freighter upper cargo area treatments

Step	Action
1	For the upper cargo deck of a freighter spraying must be completed with a single-shot aerosol can with a vertical ejection nozzle containing Permethrin 2% and d-Phenothrin 2% (or 1*R-trans*-phenothrin 2%)
2	When there is also a cargo area on the main deck (freighter aircraft), this area should be accessed for spraying via the passenger access door after the large cargo door is closed.
3	Discharge the aerosols while walking away from the spray and vacate the area once spraying has been completed.
4	Spray should be discharged as high as possible and directed towards the centre of the aircraft ceiling by an operator walking at approximately one step per second.
5	If cargo prohibits access to certain parts of the aircraft: • discharge the aerosol into the centre of aircraft, directed towards the ceiling above the top of the cargo, for the appropriate duration for the section of the aircraft that could not be accessed; or • position the aerosols evenly throughout the aircraft on top of the cargo and then activate the one-shot aerosols.
6	Once spraying is completed, allow at least 5 min for the spray to settle before opening the aircraft doors.

Appendix A: Residual disinsection certificate

Residual Disinsection Certificate

This is to certify that the aircraft named in this certificate has on this day been disinsected in accordance with the requirements of the Australian Government Department of Agriculture Water and the Environment and the New Zealand Ministry of Primary Industries as per Section 3.3 of the World Health Organization aircraft disinsection methods and procedures.

Aircraft and Disinsection Details

Aircraft registration _____ Aircraft series _____

Date of spray (dd/mm/yyyy) _____

Date of expiry (dd/mm/yyyy) _____

Airport where treatment applied _____

Note: Residual treatments are valid for a maximum of 8 weeks.

Cabin

Name of active ingredient _____

Treatment undertaken by:

Signature _____

Full name (block letters) _____

Position _____ Company Name _____

Hold (all cargo areas in freighters)

Name of active ingredient _____

Treatment undertaken by (if same as above, write "As above"):

Signature _____

Full name (block letters) _____

Position _____ Company Name _____

Appendix B: Pre-embarkation disinsection certificate

Pre-embarkation Disinsection Certificate

This certificate is valid for one flight sector only and certifies that the aircraft named in this certificate has on this day been disinsected in accordance with the requirements of the Australian Government Department of Agriculture Water and the Environment and the New Zealand Ministry for Primary Industries.

Aircraft and Disinsection Details

Aircraft registration _____ Aircraft series _____

Flight number _____ Port of departure _____

Aircraft type _____ Date sprayed (dd/mm/yyyy) _____

Cabin

Name of active ingredient _____

Size of aerosol cans used (grams) _____

Serial numbers of cans used _____

Treatment undertaken by:

Signature _____

Full name (block letters) _____

Position _____ Company Name _____

Holds (all cargo areas in freighters)

Name of active ingredient _____

Size of aerosol cans used (grams) _____

Serial numbers of cans used _____

_____

Treatment undertaken by (if same as above, write "As above"):

Signature _____

Full name (block letters) _____

Position _____ Compay Name _____

Appendix C: Pre-departure disinsection certificate

Pre-departure Disinsection Certificate

This certificate is valid for one flight sector only and certifies that the aircraft named in this certificate has on this day been disinsected in accordance with the requirements of the Australian Government Department of Agriculture Water and the Environment and the New Zealand Ministry for Primary Industries.

Aircraft and Disinsection Details

Aircraft registration _____ Aircraft series _____

Flight number _____ Port of departure _____

Aircraft type _____ Date sprayed (dd/mm/yyyy) _____

Cabin

Name of active ingredient _____

Size of aerosol cans used (grams) _____

Serial numbers of cans used _____

Treatment undertaken by:

Signature _____

Full name (block letters) _____

Position _____ Company Name _____

Holds (all cargo areas in freighters)

Name of active ingredient _____

Size of aerosol cans used (grams) _____

Serial numbers of cans used _____

_____

Treatment undertaken by (if same as above, write "As above"):

Signature _____

Full name (block letters) _____

Position _____ Company Name _____