Australia – New Zealand Bilateral Quarantine Arrangement

Systems Operation Manual 6E
This Systems Operation Manual incorporates the New Zealand Import Health Standards for Australian fruit fly host material and the Department of Agriculture’s operational requirements.

This manual is maintained and controlled by the Department of Agriculture Biosecurity Plant Division in Canberra.
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AMENDMENT RECORD

Amendments to this manual will be given a consecutive number and will be dated.

Please ensure that all amendments are inserted, obsolete pages removed and the record below is completed.

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<td>G. Edwards</td>
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<td>C. Scheibel</td>
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<td>W. Coombes</td>
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<td>A. Powell, A. Dawes, L. Merritt &amp; E. Voogt</td>
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<td>M. Mackrell</td>
<td>March 2019</td>
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GLOSSARY OF TERMS

ANVAS  Avocado Nursery Voluntary Accreditation Scheme
AA    Approved Arrangement
Dmin  The localized minimum absorbed dose within the process load
Dmax  The localized maximum absorbed dose within the process load
EXDOC Department of Agriculture electronic export documentation system
EX28  Notice of Intention to Export/Export Permit
EX161 Inspection advice notice
EX186 Transfer Certificate
EX222 Approved Arrangement equivalent of EX28
ED    Exporter Delegate
Gray (Gy) Unit of absorbed dose where 1 Gy is equivalent to the absorption of 1 joule per kilogram
IHS   Import Health Standards (New Zealand)
MeV   Mega Electron Volt
MAP   Maximum Allowable Prevalence
MICoR Manual of Importing Country Requirements; Export conditions database
MPI   Ministry for Primary Industries (New Zealand)
NZ BQA Australia-New Zealand Bilateral Quarantine Arrangement
RFP   Electronic Request for Permit
SOM   Systems Operation Manual (this document)
| **DEFINITIONS** |
|------------------|-------------------------------------------------|
| **Department of Agriculture Inspection** | An inspection of any number of packages from one exporter from the same treatment pathway presented for inspection at one time. |
| **Consignment line inspection** | Inspection consists of commodities from a common treatment pathway. The inspection lot can be made up of different growers provided grower line inspections have been undertaken. |
| **Grower line inspection** | Inspection that must be performed prior to the Department of Agriculture inspection and consists of one grower, one commodity and one treatment pathway. |
| **Maximum allowable prevalence** | The level of infestation that is the threshold, above which phytosanitary actions based on inspection would be applied. |
| **Phytosanitary certificate** | A certificate issued in accordance with Article V of the International Plant Protection Convention or at the request of a foreign country authority. |
| **Unit** | An individual piece of produce, or, in the case of grapes (a bunch) or bananas (a hand). |
INTRODUCTION

The Australia-New Zealand Bilateral Quarantine Arrangement (NZ BQA) is a formal agreement between the Australian Government Department of Agriculture and the New Zealand Ministry for Primary Industries (MPI), to ensure New Zealand's pre-export requirements are documented. This manual ensures all parties are aware of their responsibilities when exporting fruit fly host commodities to New Zealand.

The NZ BQA details a series of treatment appendices that describe the requirements for a particular treatment for fruit fly host material. The structure incorporates developments in relation to the documentation of New Zealand Import Health Standards (IHS) on a commodity-by-commodity basis.

Scope of the manual

This Systems Operation Manual (SOM) is designed to ensure:

a) Only approved fruit fly host commodities are exported to New Zealand;
b) Homogeneity of fruit fly host commodity consignments;
c) Approved treatments for fruit fly host produce are used;
d) Required levels and intensity of inspection of fruit fly host produce are maintained;
e) Post treatment security to eliminate cross contamination, reinfestation and potential substitution of legitimate export produce;
f) Trace back to grower/packer/treatment centre (as appropriate); and
g) Accurate phytosanitary certification in accordance with New Zealand requirements.

Department of Agriculture Regional Offices and State Departments of Agriculture (or equivalents) are to conduct management audits of the systems to ensure state responsibilities are being adequately performed and recorded.

This SOM gives instructions for audit procedures and maintenance of records that will be the responsibility of Department of Agriculture Regional Offices, and where applicable State Departments of Agriculture or their equivalents.
SECTION 1  PEST CATEGORIES

1.1  Pest categories

MPI have commenced the re-categorisation of pests as regulated and non-regulated pests. Certain regulated pests are deemed by MPI to be high impact pests which is divided into high impact fruit flies and high impact non fruit flies. High impact fruit fly categorisation is equivalent to the previous Risk group 3 (RG3) and high impact non fruit fly equivalent to Risk group 2 (RG2) pest categories.

As MPI review current IHSs, the existing risk categories of Risk group 1 (RG1), RG2 and RG3 will be transcribed into the new categories.

1.1.1  Risk group 3 (RG3) pests

Are pests which upon entry into New Zealand would cause major market access disruption for a wide range of New Zealand commodities and/or have significant effects on environment or agricultural production. This group includes species of economically significant fruit flies.

These pests require treatment to be undertaken in Australia with documented procedures to ensure Department of Agriculture phytosanitary certification is accurate and auditable by MPI.

If this level pest is detected in New Zealand then the consignment will be re-exported or destroyed and the treatment pathway suspended until such time as a Department of Agriculture audit is conducted, and any associated corrective action is undertaken and results accepted by MPI.

1.1.2  Risk group 2 (RG2) Pests

Are pests which upon entry into New Zealand could cause major market access disruption and/or have significant effects on environment or the agricultural production of a particular commodity.

These pests require some form of management practice to be undertaken (i.e. infield controls, area freedom, or post harvest treatments). An additional declaration to this effect must be made on the phytosanitary certificate.

If this level pest is detected in New Zealand the consignment will be re-exported, destroyed or where appropriate ordered for appropriate treatment. There will be no suspension of trade but a follow up Department of Agriculture audit will be conducted to determine cause of the system failure and associated corrective actions undertaken. The Department of Agriculture may suspend specific commodity pathway until cause of failure is determined and corrective action undertaken.

1.1.3  Risk group 1 (RG1) pests

RG1 pests are those pests which upon introduction into New Zealand could cause unacceptable economic impacts on the production of a commodity/commodities and/or the environment.

These pests require no specific formal treatment or controls, the Department of Agriculture will inspect for these pests at export inspection, if detected the consignment must be subjected to appropriate treatment/re-conditioning and represented for exporter/exporter delegate (ED) Department of Agriculture inspection.

If this level of pest is detected in New Zealand the consignment would be available to be re-conditioned, subject to appropriate treatment (if available), re-export or destroyed.
1.1.4 Non regulated pests

These pests have an unlimited tolerance during inspection and are regarded as non-actionable pests between Australia and New Zealand. It should be noted that excessive levels of non-regulated pests may interfere with Department of Agriculture inspection and may result in longer inspection times to ensure accurate identification.

1.1.5 Regulated pests

Regulated pests are regarded as actionable pests between Australia and New Zealand. Actions would be undertaken if they were intercepted/detected. As well as quarantine pests, these include new organisms as defined by the New Zealand Hazardous Substances and New Organisms Act 1996, pests that may pose a risk to human or animal health or to the environment, vectors of associated quarantine pests, and virulent strains (not present in New Zealand) of non-regulated pests and contaminants.

1.2 Maximum pest levels

Table 1 details inspection levels and tolerances that will ensure that a 95 per cent confidence level that maximum allowable prevalence (MAP) will not be exceeded.

The sample size must be selected/nominated by the exporter or exporter delegate prior to commencement of inspection and cannot be varied. This sample size must be maintained in all subsequent inspections, including Department of Agriculture export inspection.

### Table 1  INSPECTION SAMPLE SIZES AND PEST TOLERANCE LEVELS

<table>
<thead>
<tr>
<th>Lot size (units)</th>
<th>Sample size</th>
<th>Acceptance level RG1 pests</th>
<th>Acceptance level regulated weed seeds</th>
<th>Acceptance level RG2 &amp; RG3 pests</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 1000</td>
<td>450</td>
<td>0</td>
<td>≤ 6</td>
<td>0</td>
</tr>
<tr>
<td>1001 – 2000</td>
<td>520</td>
<td>0</td>
<td>≤ 7</td>
<td>0</td>
</tr>
<tr>
<td>2001 – 3000</td>
<td>550</td>
<td>0</td>
<td>≤ 7</td>
<td>0</td>
</tr>
<tr>
<td>3001 – 4000</td>
<td>560</td>
<td>0</td>
<td>≤ 7</td>
<td>0</td>
</tr>
<tr>
<td>4001 – 5000</td>
<td>570</td>
<td>0</td>
<td>≤ 7</td>
<td>0</td>
</tr>
<tr>
<td>≥ 5001</td>
<td>600</td>
<td>0</td>
<td>≤ 8</td>
<td>0</td>
</tr>
<tr>
<td>&gt; 1000</td>
<td>950</td>
<td>1</td>
<td>≤ 12</td>
<td>0</td>
</tr>
<tr>
<td>&gt; 1250</td>
<td>1250</td>
<td>2</td>
<td>≤ 16</td>
<td>0</td>
</tr>
</tbody>
</table>

Tolerances for irradiated product listed in Appendix 12.

1.3 Contaminants

Consignments contaminated with soil, or other potential carriers of quarantine pests (e.g. leaf litter) must not exceed tolerances below. The consignment may be reconditioned to remove the infestation. After reconditioning, the consignment must be re-inspected and may be exported if found free from infestation.

Consignment lines contaminated with soil in excess of 25g per 600 units shall be washed free of soil prior to release, re-shipped, or destroyed at the importers choice and expense.
Consignment lines contaminated with foliage in excess of one leaf per 50 units shall be resorted, reshipped, or destroyed at the importers option or expense.
SECTION 2 TREATMENT APPENDICES

2.1 Summary

The NZ BQA is divided into separate treatment pathways, called treatment appendices.

The appendices form the framework for the treatment of commodities for the species of economically significant fruit flies (RG3 pests).

The treatment appendices are treated as separate distinct pathways and as such commodities exported under the same treatment pathways may be inspected together at Department of Agriculture inspection. Commodities from separate treatment pathways may not be combined for inspection.

TREATMENT FRAMEWORK (APRIL 2014)

<table>
<thead>
<tr>
<th>Commodity Specific Import Health Standard (Genus:Species)</th>
<th>BQA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarantine: RG 3</td>
<td></td>
</tr>
<tr>
<td>Quarantine: RG2</td>
<td></td>
</tr>
<tr>
<td>Quarantine: RG1</td>
<td></td>
</tr>
<tr>
<td>“Other” categories non-regulated, non-quarantine, etc.</td>
<td></td>
</tr>
</tbody>
</table>

Phytosanitary measures linking to official Department of Agriculture field systems

- Appendix 1: Exotic fruit fly Pest Free Area
  All commodities
- Appendix 2: Endemic fruit fly Pest Free Area
  All commodities
- Appendix 3: Methyl bromide fumigation
  Strawberry, Watermelon, Capsicum
- Appendix 4: Dimethoate dip
  Rockmelon, Honeydew Melon
- Appendix 5: Cold disinfection
  Grape, Citrus, Pear, Avocado
- Appendix 6: Non Host Status
  Pineapple, bananas
- Appendix 7: Heat Treatment (not yet developed)
- Appendix 8: There is no treatment associated with this appendix
- Appendix 9: There is no treatment associated with this appendix
- Appendix 10: Field control programs
  As a component of other treatment Appendices
  Capsicum, Cucumber, Honeydew Melon, Rockmelon, Watermelon, Scallopini, Zucchini
- Appendix 11: Winter window (complemented by Appendix 10)
  Hosts of Bactrocera cucumis only
  Rockmelons, Watermelons, Honeydew melon, Cucumber, Scallopini, Zucchini
- Appendix 12: Irradiation
  Mango, Papaya, Lychee, Capsicum, Tomato, grapes
## Table 2  SUMMARY OF REQUIREMENTS FOR ACCESS OF FRUIT FLY HOST COMMODITIES

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>TREATMENT</th>
<th>REGISTRATION</th>
<th>CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avocado Persea americana</td>
<td>Area freedom</td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td><strong>Appendix 2</strong></td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cold storage</td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>In-transit cold disinestation treatment</strong></td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Appendix 5</strong></td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 °C (±0.2 °C) for 16 Days</td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>TREATMENT</th>
<th>REGISTRATION</th>
<th>CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banana Musa spp.</td>
<td>Non-host status (Based on maturity)</td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td><strong>Appendix 6</strong></td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td></td>
</tr>
</tbody>
</table>

GR- Grower registration  PR – Packhouse registration  FF – Freight Forwarder / Load out facility  TR – Treatment registration  ER- Export registration
<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>TREATMENT</th>
<th>REGISTRATION</th>
<th>CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capsicum</td>
<td>Area freedom*</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td>Capsicum annuum</td>
<td>Appendix 2</td>
<td>✓</td>
<td>* In-field pest control activities throughout the production season are</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>required for the Risk group 2 pest <em>Conogethes punctiferalis</em> (yellow peach</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>moth) otherwise irradiation at 289Gy, or fumigation is required.</td>
</tr>
<tr>
<td>Irradiation**</td>
<td>Appendix 12 150 Gy</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
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<tr>
<td></td>
<td></td>
<td>✓</td>
<td>** Irradiation at 150 Gy can only occur if in-field pest control activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>for the Risk group 2 pest <em>Conogethes punctiferalis</em> (yellow peach moth)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>are implemented throughout the production season, otherwise irradiation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>at 289Gy, or fumigation is required.</td>
</tr>
<tr>
<td>Irradiation***</td>
<td>Appendix 12 400 Gy</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>*** The irradiation rate of 400 Gy is for all regulated arthropod pests.</td>
</tr>
<tr>
<td>Methyl bromide</td>
<td>Methyl bromide fumigation†</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td>fumigation†</td>
<td>Appendix 3††</td>
<td>✓</td>
<td>† Fumigation can only occur in conjunction with Appendix 10 (field control</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>programs) and implementation of specific field pest control activities for</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>the Risk group 2 pest <em>Conogethes punctiferalis</em> (yellow peach moth)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>throughout the production season. If appendices 3 and 10 with field pest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>control activities for <em>Conogethes punctiferalis</em> (yellow peach moth) are</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>not used, then irradiation at 289Gy must be used.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>Methyl bromide fumigation may be used on capsicum from all states and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>territories, with the exception of the parts of Western Australia that are</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>outside the Ord River Irrigation Area fruit fly free area.</td>
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GR- Grower registration   PR – Packhouse registration   FF – Freight Forwarder / Load out facility   TR – Treatment registration   ER- Export registration
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<tr>
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<th>CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrus *</td>
<td>Area freedom*</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>Appendix 2</td>
<td></td>
<td>* Nil grower registration required under area freedom appendix, as citrus black spot (Guignardia citricarpa) is restricted to the state of Queensland.</td>
</tr>
<tr>
<td></td>
<td>Cold treatment</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>(Species specific rates)</td>
<td></td>
<td>*Grower, packhouse, freight forwarder / load-out registration required only for the state of Queensland, where Citrus Black Spot occurs.</td>
</tr>
<tr>
<td></td>
<td>Appendix 5**</td>
<td></td>
<td>**Please refer to Table 6 (pg 50-51) of Section 6.6: Treatment Appendices for contingency cold treatment schedules permitted for Queensland fruit fly (Bactrocera tryoni) outbreaks in pest free areas.</td>
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**GR**- Grower registration  **PR** – Packhouse registration  **FF** – Freight Forwarder / Load out facility  **TR** – Treatment registration  **ER**- Export registration

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<tr>
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<td>Area freedom*</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
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<td></td>
<td>Appendix 2</td>
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<tr>
<td></td>
<td>Cold treatment</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>(Species specific rates)</td>
<td></td>
<td>*Grower, packhouse, freight forwarder / load-out registration required only for the state of Queensland, where Citrus Black Spot occurs.</td>
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<tr>
<td></td>
<td>Appendix 5**</td>
<td></td>
<td>**Please refer to Table 6 (pg 50-51) of Section 6.6: Treatment Appendices for contingency cold treatment schedules permitted for Queensland fruit fly (Bactrocera tryoni) outbreaks in pest free areas.</td>
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<td>Area freedom*</td>
<td>* ✓ ✓ ✓ ✓</td>
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<td></td>
<td>Appendix 2</td>
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<tr>
<td></td>
<td>Cold treatment</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>(Species specific rates)</td>
<td></td>
<td>*Grower, packhouse, freight forwarder / load-out registration required only for the state of Queensland, where Citrus Black Spot occurs.</td>
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<td></td>
<td>Appendix 5**</td>
<td></td>
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<tr>
<td>Citrus *</td>
<td>Area freedom*</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
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<td>Appendix 2</td>
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<td>* Nil grower registration required under area freedom appendix, as citrus black spot (Guignardia citricarpa) is restricted to the state of Queensland.</td>
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<tr>
<td></td>
<td>Cold treatment</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>(Species specific rates)</td>
<td></td>
<td>*Grower, packhouse, freight forwarder / load-out registration required only for the state of Queensland, where Citrus Black Spot occurs.</td>
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<td>Appendix 5**</td>
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<td>Area freedom*</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>Appendix 2</td>
<td></td>
<td>* Nil grower registration required under area freedom appendix, as citrus black spot (Guignardia citricarpa) is restricted to the state of Queensland.</td>
</tr>
<tr>
<td></td>
<td>Cold treatment</td>
<td>* ✓ ✓ ✓ ✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>(Species specific rates)</td>
<td></td>
<td>*Grower, packhouse, freight forwarder / load-out registration required only for the state of Queensland, where Citrus Black Spot occurs.</td>
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<td></td>
<td>Appendix 5**</td>
<td></td>
<td>**Please refer to Table 6 (pg 50-51) of Section 6.6: Treatment Appendices for contingency cold treatment schedules permitted for Queensland fruit fly (Bactrocera tryoni) outbreaks in pest free areas.</td>
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<tr>
<td>-----------------</td>
<td>----------------------------------</td>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cucumber</td>
<td>Area freedom</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td><em>Cucumis sativus</em> Area freedom</td>
<td>Appendix 2</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Winter Window</td>
<td>Appendix 10 &amp; 11</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>1 May – 1 Sept.</td>
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<tbody>
<tr>
<td>Grapes</td>
<td>Area freedom</td>
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<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td><em>Vitis vinifera</em> Area freedom</td>
<td>Appendix 2</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Cold treatment</td>
<td>Appendix 5</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>0 °C or below for not less than 13 days</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 °C (±0.6 °C) for 16 days</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

* For information on the irradiation pathway please see Attachment 3 – Addendum to BQA SOM 6E – Table Grapes – Irradiation option

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</thead>
<tbody>
<tr>
<td>Honeydew melon</td>
<td>Area freedom</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td>Cucumis melo</td>
<td>*Appendix 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dimethoate and in field controls</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>*Appendix 4 &amp; 10</td>
<td>✓</td>
<td></td>
</tr>
<tr>
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<td>Winter Window</td>
<td>✓</td>
<td>For full condition text, please consult the MICoR database.</td>
</tr>
<tr>
<td></td>
<td>*Appendix 10 &amp; 11</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 May – 1 Sept.</td>
<td>✓</td>
<td></td>
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</table>

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<th>REGISTRATION</th>
<th>CONDITIONS</th>
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</thead>
<tbody>
<tr>
<td>Lychee <em>Litchi chinensis</em></td>
<td>Irradiation</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>*Appendix 12</td>
<td>✓</td>
<td>✓*</td>
</tr>
<tr>
<td></td>
<td>250 or 350 Gy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<thead>
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<th>CONDITIONS</th>
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</thead>
<tbody>
<tr>
<td>Mango <em>Mangifera indica</em></td>
<td>Irradiation</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>*Appendix 12</td>
<td>✓</td>
<td>✓*</td>
</tr>
<tr>
<td></td>
<td>250 or 350 Gy</td>
<td></td>
<td></td>
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</table>

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<tbody>
<tr>
<td>Papaya <em>Carica papaya</em></td>
<td>Irradiation**</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>*Appendix 12</td>
<td>✓</td>
<td>✓*</td>
</tr>
<tr>
<td></td>
<td>150 Gy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Irradiation</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>*Appendix 12</td>
<td>✓</td>
<td>✓*</td>
</tr>
<tr>
<td></td>
<td>289 or 350 Gy</td>
<td></td>
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</tbody>
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<tbody>
<tr>
<td>Pears</td>
<td>Area freedom</td>
<td>✓</td>
<td>For full condition text, please consult the MCoR database.</td>
</tr>
<tr>
<td>Pyrus communis</td>
<td>Appendix 2</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cold treatment</td>
<td>✓</td>
<td>For full condition text, please consult the MCoR database.</td>
</tr>
<tr>
<td></td>
<td>Appendix 5</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 °C or below for not less than 13 days</td>
<td>✓*</td>
<td>* Registration required post treatment (for on-shore cold treatment).</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 °C (±0.6 °C) for 16 days</td>
<td>✓</td>
<td></td>
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</thead>
<tbody>
<tr>
<td>Pineapple &lt;i&gt;Ananas comosus&lt;/i&gt;*</td>
<td>Non-host status (Based on variety)</td>
<td>✓</td>
<td>For full condition text, please consult the MICO database.</td>
</tr>
<tr>
<td>Appendix 6</td>
<td></td>
<td></td>
<td>* Only the varieties ‘Smooth Cayenne’, ‘Aus-Jubilee’, ‘MD-2’ (also known as ‘73-114’) and ‘73-50’ (also known as ‘CO-2’) are permitted to be exported under this appendix.</td>
</tr>
</tbody>
</table>

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</thead>
<tbody>
<tr>
<td>Pumpkin &lt;i&gt;Cucurbita pepo&lt;/i&gt;</td>
<td>Area Freedom</td>
<td>✓ ✓ ✓</td>
<td>For full condition text, please consult the MICO database.</td>
</tr>
<tr>
<td>Appendix 2</td>
<td></td>
<td></td>
<td></td>
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<tbody>
<tr>
<td>Rockmelon <em>Cucumis melo reticulatus</em></td>
<td>Area Freedom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appendix 2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Winter Window</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appendix 10 &amp; 11</td>
<td>1 May – 1 Sept.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Dimethoate * Appendix 4</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>* Registration required post treatment.</td>
<td></td>
<td></td>
</tr>
</tbody>
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<tr>
<td>Scallopin <em>Cucurbita pepo</em></td>
<td>Area Freedom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appendix 2</td>
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<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Winter Window</td>
<td>✓</td>
<td>✓</td>
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<tbody>
<tr>
<td><strong>Strawberry</strong> (<em>Fragaria spp.</em>)</td>
<td>Area Freedom</td>
<td>✓✓✓</td>
<td>For full condition text, please consult the MICO R database.</td>
</tr>
<tr>
<td></td>
<td>Appendix 2</td>
<td>✓✓✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Methyl bromide fumigation</td>
<td>✓✓✓✓</td>
<td>For full condition text, please consult the MICO R database.</td>
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<td></td>
<td>Appendix 3</td>
<td>✓✓✓✓</td>
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<tr>
<td></td>
<td>48g/m³ for 3 hours at a temperature of at least 15°C</td>
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</thead>
<tbody>
<tr>
<td><strong>Tomato</strong> (<em>Lycopersicon esculentum</em>)</td>
<td>Area Freedom</td>
<td>✓✓✓</td>
<td>For full condition text, please consult the MICO R database.</td>
</tr>
<tr>
<td></td>
<td>Appendix 2</td>
<td>✓✓✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Irradiation</td>
<td>✓✓✓</td>
<td>For full condition text, please consult the MICO R database.</td>
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<tr>
<td></td>
<td>Appendix 12</td>
<td>✓✓✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>150 Gy</td>
<td>✓✓✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 Gy*</td>
<td>✓✓✓</td>
<td>*The irradiation rate of 400 Gy is for all regulated arthropod pests.</td>
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<td>Packhouse registration</td>
<td>Freight Forwarder / Load out facility</td>
<td>Treatment registration</td>
<td>Export registration</td>
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<td>REGISTRATION</td>
<td>CONDITIONS</td>
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</tr>
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<td>-----------------</td>
<td>-----------------------------------------------</td>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Watermelon</td>
<td>Area Freedom</td>
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<td>For full condition text, please consult the MCoR database.</td>
<td></td>
</tr>
<tr>
<td>Citrullus lanatus</td>
<td>Appendix 2</td>
<td>✓</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Methyl bromide fumigation†</td>
<td>✓</td>
<td>✓</td>
<td>For full condition text, please consult the MCoR database.</td>
<td></td>
</tr>
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<td>32g/m³ for 4 hours at flesh temperatures of 21–26 °C</td>
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<td></td>
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<tr>
<td></td>
<td>and</td>
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<tr>
<td></td>
<td>In field control</td>
<td>✓</td>
<td></td>
<td></td>
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<td></td>
<td>Appendix 10</td>
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<td></td>
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<tr>
<td></td>
<td>Winter Window</td>
<td>✓</td>
<td>For full condition text, please consult the MCoR database.</td>
<td></td>
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<tr>
<td></td>
<td>* Appendix 10 &amp; 11</td>
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<td></td>
<td>1 May – 1 Sept.</td>
<td>✓</td>
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</table>

GR- Grower registration  PR – Packhouse registration  FF – Freight Forwarder / Load out facility  TR – Treatment registration  ER- Export registration
<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>TREATMENT</th>
<th>REGISTRATION</th>
<th>CONDITIONS</th>
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<tr>
<td>Zucchini</td>
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<td>For full condition text, please consult the MCoR database.</td>
</tr>
<tr>
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<td>* Appendix 2</td>
<td>✓</td>
<td></td>
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<tr>
<td></td>
<td>Winter Window</td>
<td>✓</td>
<td>For full condition text, please consult the MCoR database.</td>
</tr>
<tr>
<td></td>
<td>* Appendix 10 &amp; 11</td>
<td>✓</td>
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</tr>
<tr>
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<td>1 May – 1 Sept.</td>
<td>✓</td>
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</tr>
</tbody>
</table>

GR- Grower registration  PR – Packhouse registration  FF – Freight Forwarder / Load out facility  TR – Treatment registration  ER- Export registration
2.2 Appendix 1 – Country freedom from fruit fly

The New Zealand Ministry for Primary Industries (MPI) recognise Australia is free of several species of fruit fly of economic significance to New Zealand (based on MPI Biosecurity Authority Standard 158.03.07).

Australia’s freedom status for these fruit flies is maintained through quarantine restrictions and a national monitoring program. The monitoring program is managed by the Australian Chief Plant Protection Office (ACPPO) and consists of exotic fruit fly trapping and monitoring regimes conducted at international airports and seaports.

2.3 Appendix 2 – Area freedom districts within Australia

2.3.1 General requirements

Appendix 2 refers to economic species of fruit flies which are endemic to Australia for which, through trapping and monitoring regimes, area freedom for specific species of fly have been established. The areas listed below have been audited and accepted by MPI as complying with MPI Biosecurity Authority Standard 158.03.06.

Area freedom will be assumed, unless through State Department advice, the Department of Agriculture notifies MPI to the contrary. This will be done for any fruit fly free area when an outbreak is declared.

Queensland fruit fly

For Queensland fruit fly (Qfly), an outbreak will have occurred if:

- One or more larvae or pupae are found in locally grown fruit; or
- Five male Qfly are trapped within 1 km of each other, within a 14-day period; or
- A single gravid female Qfly or larvae is detected.

Mediterranean fruit fly

For Mediterranean fruit fly (Medfly), an outbreak trigger is dependent on the whether supplementary trapping is deployed after a detection of 2 male Medfly within 1 km within a 14 day period. The decision to deploy or not to deploy supplementary traps is made by the applicable State department of agriculture.

Following a detection of 2 male Medfly within 1 km within a 14 day period, larval searches will be conducted within 200 m of the discovery point.

If supplementary traps are not deployed, an outbreak will have occurred if:

- A total of 3 male Medfly are trapped within 1 km of each other, within a 14-day period i.e. the initial 2 flies plus one more; or
- A single gravid female fly or larvae is detected.

If supplementary traps are deployed (at the rate of 16 traps within 200 metres of the discovery point), an outbreak will have occurred if:
• A total of 5 male Medfly are trapped within 1 km of each other, within a 14-day period i.e. the intitial 2 flies plus 3 additional flies; or
• A single gravid female Medfly or larvae is detected.

In cases where an outbreak criteria outlined above are triggered, ‘Area Freedom’ will be suspended until a period equivalent to the time taken for development of three generations of fruit flies has elapsed, without further flies being detected. The suspension will apply to all fruit fly host material produced within a radius of 80 km of the outbreak site, however

• For State Departments which have managements and control procedures which have been approved by MPI as meeting the requirements and conditions of MPI Biosecurity Authority Standard 158.03.06, the suspension period will be reduced to;
  o For Qfly—one generation time plus 28 days and the suspension zone will be a radius of 15 kms for a single outbreak site;
  o For Medfly— one generation time plus 28 days, or 12 weeks, whichever is longer, and the suspension zone will be a radius of 15 kms for a single outbreak site;
  o Should 2 outbreak sites occur within 1 – 3 km of each other a 30km outbreak zone will be applied, the zone will be centred on a point mid-distance between two outbreaks.

State Departments of Agriculture (or equivalent) must report all fruit fly detections in the recognised zones to the Department of Agriculture Canberra office within 48 hours of detection and identification. This information will then be supplied to MPI at the earliest opportunity.

2.3.2 Approved area freedom districts

Districts approved by MPI are listed below.

**Sunraysia - Victoria and New South Wales**

Note: From 2 April 2014, the Sunraysia pest free area was voluntarily suspended by the Victorian Government until further notice.

This area covers the horticulture growing districts along the Murray River in both New South Wales and Victoria and the associated irrigation systems, and includes (but is not excluded to) the townships/cities of Merbein, Coomealla, Mildura, Red Cliff, Euston, Robinvale, Boundary Bend, Nyah, Woorinen, Swan Hill, Barham, Koondrook and Kerang.

Area (d) is the area covering Mildura, Nangiloc/Colignan, Red Cliff, Curlwaa, Dareton and areas between.

Area (e) is the Central Murray including the districts of Robinvale, Euston, Boundary Bend, Wemen and areas between.

Area (f) is the Mid Murray area including the townships of Nyah, Swan Hill, Koondrook, Barham and areas between.

**Riverland - South Australia**

This area covers the horticulture growing districts along the Murray River and associated irrigation systems from the Victoria Border (including 3 properties located in the Shire of Mildura), through
the townships of (but not excluded to), Paringa, Renmark, Loxton, Berri, Barmera, Waikerie, Cadell, Blanchetown and Walkers Flat.

Area (g) is those districts surrounding the townships of Renmark, Loxton, Berri, Barmera, Waikerie and areas between.

Area (h) is the Riverland extension districts of Cadell, Blanchetown, Walkers Flat and Swan Reach, the Shire of Mildura and areas between.

Area (i) the Mypolonga Township surrounds.

Tasmania

The state of Tasmania, through a trapping regime centred on ports and airports to detect the entry of any fruit flies that may have been transported from the mainland, can also claim area freedom from fruit flies. A total of 650 Jackson traps baited for Queensland fruit fly and Mediterranean fruit fly are located in these areas.

The Ord River Irrigation Area – Western Australia

This area covers the Ord River Irrigation Area (ORIA) as outlined below. This is for Mediterranean fruit fly area freedom only.

Area (j) Ord River Irrigation Area (Area including the districts and townships of Kununurra, Packsaddle Plain, Maxwell Plains, Ivanhoe Plain and the areas north of the town site of Kununurra and north-west of the Ord River).

NOTE: Should any stages of Risk group 3 fruit fly (alive or dead) be found during Department of Agriculture or industry inspections in Australia, the Department of Agriculture will inform the relevant State Department of Agriculture of the detection. The Department of Agriculture will suspend area freedom certification (for New Zealand and all other markets) until the cause of the find can be determined.

Should any stages of Risk group 3 fruit fly (either alive or dead) be found during an MPI import inspection, area freedom certification will be suspended for all districts of Australia until a Department of Agriculture audit determines the cause of the fruit fly find. Reinstatement of areas not directly involved in the fruit fly detection may be permitted depending on results of the Department of Agriculture audit.

Should any stages of a fruit fly species other than Queensland or Mediterranean fruit fly be detected and found to cause an outbreak, the period of suspension will be negotiated between the Department of Agriculture and MPI.

2.4 Appendix 3 – Fumigation

This treatment pathway allows the export of watermelons, strawberries and capsicums to New Zealand. Fruit must be subjected to methyl bromide fumigation.

Waterlemons and capsicums exported under this pathway must also comply with Appendix 10 which covers field control programs of fruit flies. Therefore strawberries, watermelons and capsicums may not be combined for inspection.
Fumigation practices must also be carried out in accordance with the current version of the Department of Agriculture’s Methyl Bromide Standard.

The Standard contains details for effective fumigation procedures and can be found on the Department of Agriculture website and via the link on the Manual of Importing Country Requirements or MCoR database website.

Note: Methyl bromide fumigation may be used on capsicum from all states and territories, with the exception of the parts of Western Australia that are outside the Ord River Irrigation Area fruit fly free area.

2.5 Appendix 4 – Dimethoate

This treatment pathway allows the export of rockmelons and honeydew melons and to New Zealand. Fruit must undergo mandatory dimethoate treatment. For some commodities this appendix must be used in conjunction with Appendix 10 (field control programs).

2.6 Appendix 5 – Cold treatment

Citrus fruits, pears, grapes and avocados can be treated by cold storage disinfestation for export to New Zealand. Cold disinfestation treatments can be completed on shore or in-transit.

2.7 Appendix 6 – Non host

This pathway deals with commodities which have been accepted by MPI as non-host of endemic Australian fruit flies, either based on maturity (i.e. mature green bananas) or by approved varieties (pineapples). Only pineapples of the ‘Smooth Cayenne’ variety or approved varieties that are genetically ≥ 50 per cent ‘Smooth Cayenne’ and bananas can be exported under this pathway.

Bananas are accepted as being non-hosts to the fruit fly species of economic significance present in Australia when in the unripe stage of maturity.

Bananas must be harvested, packed and exported in the unripe (i.e. mature green) stage to New Zealand. Consignments containing bananas at the colour break to full ripe stage will be rejected for export to New Zealand.

2.8 Appendix 7 – Heat treatments

At this time there are no commodities permitted for export under this pathway.

2.9 Appendix 8 – Not currently in use

2.10 Appendix 9 – Not currently in use

2.11 Appendix 10 – Field control programs

The field control programs referred to in this section of the manual specifically relate to the control of Risk Group 3 fruit flies.

This appendix is intended to be used in combination with other appendices rather than as a stand-alone treatment. For example, honeydew exports to New Zealand under the dimethoate dip treatment
require both a post-harvest dip and pre-harvest field control program – a combination of both Appendix 4 and Appendix 10.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 3 – Methyl bromide fumigation</td>
<td>watermelon and capsicum</td>
</tr>
<tr>
<td>Appendix 4 – Dimethoate</td>
<td>honeydew melon, rockmelon</td>
</tr>
<tr>
<td>Appendix 11 – Winter window</td>
<td>rockmelon, honeydew melon, cucumber, watermelon, zucchini, scallopini</td>
</tr>
</tbody>
</table>

2.12 Appendix 11 – Winter window

A ‘winter window’ access period has been negotiated between MPI and the Department of Agriculture, specifically for those commodities subject to infestation by *Bactrocera cucumis* (cucumber fruit fly).

Winter window access specifically applies to cucurbits, and relies on in-field control mechanisms rather than post-harvest treatment. The access period is between **1 May and 1 September in any year** (arriving in New Zealand).

**Rockmelons, scallopini, honeydew melons, zucchini** and **cucumbers** can be exported under this appendix from areas recognised free from Mediterranean fruit fly. Currently areas recognised free of Mediterranean fruit fly are the Ord River Irrigation Area in Western Australia and the states of Queensland, New South Wales, Victoria, the Northern Territory, and Tasmania.

As cucumber fruit fly (*Bactrocera cucumis*) is the only RG3 pest listed for watermelons, this commodity can be exported under this appendix from all areas of Australia.

2.13 Appendix 12 – Irradiation

Mangoes, lychees, papayas, tomatoes, capsicums and grapes may be exported under this treatment pathway.

**Mangoes and lychees**

The minimum treatment rate, specified by MPI, for mangoes and lychees exported from Australia is 250 Gy. This minimum irradiation rate is deemed to be effective for those fruit flies and regulated arthropods within the commodity pest listings for mangoes and lychees (see Attachment 1).

**Tomatoes**

The minimum treatment rate specified by MPI for tomatoes exported from Australia is 150 Gy. This minimum irradiation rate is deemed to be effective for all fruit flies.

**Capsicum, papayas and grapes**

The minimum treatment rate, specified by MPI, for papaya and capsicum exported from Australia is 150 Gy. The 150 Gy treatment is accepted by MPI as an effective treatment for fruit fly pests. However, if this rate is chosen, then effective in-field management practices must be undertaken for *Conogethes punctiferalis* (yellow peach moth) prior to export.
For capsicums and papaya, if irradiating at 150 Gy there is an option to fumigate with methyl bromide as a control for yellow peach moth if the grower has chosen not to implement field control programs.

A treatment option of irradiation at 289 Gy is also available for grapes, papaya and capsicum where no in-field yellow peach moth control is undertaken. The 289 Gy treatment option has been accepted by MPI as effective for fruit flies and *Conogethes punctiferalis*.

**Alternative treatment rates**

400 Gy has been approved as a generic treatment rate for all insects on mangoes, lychees, tomatoes and capsicum - excluding adult or pupae of *Lepidopteran* species, *Acari* (excluding Tetranychidae) and vectoring species (identified as [vect] in the commodity pest lists).

Should efficacy data not be on file for other arthropods irradiated at 400 Gy, corrective/treatment actions may need to be instigated prior to the Department of Agriculture endorsing the consignment or MPI releasing the consignment, should the pest interception be encountered upon arrival in New Zealand.

**Vectors**

If vectors are found in the consignment during phytosanitary inspection, the consignment must either be rejected for export or fumigated. Note: Vectors are identified in the SOM pest lists with the following (vect.).

**Plant pathogens**

If a plant pathogen is found in the consignment during phytosanitary inspection, the consignment must be rejected and is not eligible for export.

**Lepidoptera**

If Lepidoptera adults or pupae are found during Department of Agriculture phytosanitary inspection, the consignment must be fumigated. Where Lepidopteran adults or pupae are detected on-arrival in New Zealand, the effectiveness of the irradiation dose will be subject to review based on the pest intercepted.

**Mites**

If mites from the order *Acari* (excluding those from the family Tetranychidae) are found during Department of Agriculture phytosanitary inspection, the consignment must be treated at 500 Gy or fumigated. Where mites from the order *Acari* (excluding those from family Tetranychidae) are detected on-arrival in New Zealand the effectiveness of the irradiation dose will be subject to review based on the pest intercepted.

- 400 Gy will manage all Tetranychidae
- 500 Gy will manage all other *Acari*

To prevent delays in collating this information, treatment certificates stating Dmin and Dmax doses are to be supplied to MPI with all exported consignments.

Detection of a live arthropod pest in a consignment at inspection by Department of Agriculture or MPI, does not necessarily result in the consignment being rejected for export. Sterility of the pest is an acceptable outcome on this treatment pathway and may result in the pest still being alive after treatment.
The Food Standards Australia & New Zealand (FSANZ) Australia New Zealand Food Standards Code for irradiated tropical fruits has a Dmax of 1000 Gy (1 kGy). The requirements (including mandatory labelling) set by FSANZ are applicable for commodities treated under this pathway, these requirements can be found at www.foodstandards.gov.au and www.foodsafety.govt.nz.

SECTION 3 GROWER RESPONSIBILITIES

3.1 Summary

<table>
<thead>
<tr>
<th>Treatment Pathway</th>
<th>Commodity</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 2 Area Freedom</td>
<td>Avocados</td>
<td>Growers must register with the Department of Agriculture to maintain field controls for Risk Group 2 diseases Cercospora Spot Blotch and Sun Blotch Viroid.</td>
</tr>
<tr>
<td>Capsicum</td>
<td>Growers must register with the Department of Agriculture for the control of Risk Group 2 pest Conogethes punctiferales (unless opting for mandatory methyl bromide fumigation).</td>
<td></td>
</tr>
<tr>
<td>Grapes</td>
<td>Growers must register with the Department of Agriculture to maintain field controls for the RG 2 pest Conogethes punctiferales. Department of Agriculture will certify southern state grapes area free for the RG 2 pest Maconellicoccus hirsutus</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Growers are not required to register with the Department of Agriculture for export under this treatment.</td>
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</tr>
<tr>
<td>Appendix 3 Fumigation</td>
<td>Strawberries</td>
<td>Growers are not required to register with the Department of Agriculture for export under this treatment.</td>
</tr>
<tr>
<td>Watermelons</td>
<td>Growers must register with the Department of Agriculture under Appendix 10 to maintain field controls minimising the risk of fruit fly infestation during production</td>
<td></td>
</tr>
<tr>
<td>Capsicum</td>
<td>Growers must register with the Department of Agriculture under Appendix 10 to maintain field controls minimising the risk of fruit fly infestation during production.</td>
<td></td>
</tr>
<tr>
<td>Appendix 4 Dimethoate</td>
<td>Honeydews</td>
<td>Growers must register with the Department of Agriculture under Appendix 10 to maintain field controls minimising the risk of fruit fly infestation during production.</td>
</tr>
<tr>
<td>Appendix 5 Cold Treatment</td>
<td>Avocados</td>
<td>Growers must register with the Department of Agriculture to maintain field controls for the RG 2 diseases Cercospora Spot Blotch and Sun Blotch Viroid.</td>
</tr>
<tr>
<td>Citrus</td>
<td>Queensland growers must register with the Department of Agriculture to maintain field controls for the RG 2 pest Guignardia citricarpa (citrus black spot). Other state departments survey for citrus black spot, negating the need for grower registration.</td>
<td></td>
</tr>
<tr>
<td>Grapes</td>
<td>Growers must register with the Department of Agriculture to maintain field controls for the RG2 pest Conogethes punctiferales (yellow peach moth). The Department of Agriculture will be certifying Southern State grapes area free for the Risk group 2 pest Maconellicoccus hirsutus (hibiscus mealybug).</td>
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</table>
### Treatment Pathway

<table>
<thead>
<tr>
<th>Treatment Pathway</th>
<th>Commodity</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 6</td>
<td>Pineapples</td>
<td>Growers are not required to register with the Department of Agriculture for ‘Smooth Cayenne’ and other approved related varieties pineapples under this treatment. Growers must keep records verifying ‘Smooth Cayenne’ and other approved related varietes’ parentage.</td>
</tr>
<tr>
<td>Non Host</td>
<td>Bananas</td>
<td>Growers are required to register with the Department of Agriculture to maintain field controls for the high impact non fruit fly pest <em>Maconellicoccus hirsutus</em> (pink hibiscus mealy bug). Unless opting for mandatory fumigation.</td>
</tr>
<tr>
<td>Appendix 10</td>
<td>All commodities</td>
<td>All commodities which require Appendix 10 (In field controls for fruit fly) must be registered.</td>
</tr>
<tr>
<td>In field controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appendix 11</td>
<td>Rockmelons, honeydew melons, cucumbers, watermelons zucchinis and scallopinis</td>
<td>Growers must register with the Department of Agriculture under Appendix 11 to maintain field controls minimising the risk of fruit fly infestation during production.</td>
</tr>
<tr>
<td>Winter window</td>
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<td></td>
</tr>
<tr>
<td>Appendix 12</td>
<td>Mango, Lychee &amp; Tomato</td>
<td>Growers are not required to be registered under this pathway.</td>
</tr>
<tr>
<td>Irradiation</td>
<td>Papaya, Capsicum &amp; Grapes</td>
<td>Growers must register with the Department of Agriculture to maintain field controls for Risk Group 2 <em>Conogethes punctiferalis</em> (yellow peach moth) if exporters intend to irradiate at 150 Gy.</td>
</tr>
</tbody>
</table>

### 3.2 General requirements

Growers of commodities requiring registration must maintain spray diaries and implement field hygiene requirements that demonstrate appropriate management and recording for those pests listed as RG2 and RG3 in the pest lists (Attachment 1).

### 3.3 Registration

Application for registration (Attachment 2.1) will be made to the Department of Agriculture office in the grower's region. To ensure there are no delays with processing and completing registrations it is recommended that applications be forwarded to the Department of Agriculture no later than 6 weeks prior to export. Applications are processed in order of receipt; late applications may be subject to delays. Applications must include a property map identifying blocks on which the relevant NZ BQA commodities are grown.

Growers may apply direct to their regional Department of Agriculture office or to the packhouse they are supplying. Packhouses must forward any grower applications through to the Department of Agriculture as soon as possible for inclusion on the regions “master” grower/packer list.

Once application for registration is received regional Department of Agriculture staff will organise a time to visit the property to conduct a preliminary audit. During the visit the inspector will ensure the grower(s) are aware of their responsibilities under the SOM, check relevant documentation eg spray diaries, conduct an inspection of the property (registered blocks), and will allocate a grower registration number.
Growers that have previously registered under this arrangement in the previous season without non-conformance will not require a Department of Agriculture visit prior to export commencement. However, an audit must be performed early in the season.

NOTE: In the above circumstance, growers MUST notify the Department of Agriculture of their intent to commence export at least 6 weeks prior to export. Growers must provide evidence that required control measures have been carried out (eg spray diaries). If Department of Agriculture approval is granted, a time for an audit visit will be organised. Failure to comply with these directions may mean growers, irrespective of previous participation, will require an ‘initial audit’ before being allowed to commence export.

3.4 Orchard responsibilities

Growers must apply recommended field controls a minimum of 4 weeks prior to commencement of harvest. Field monitoring and spray diary records must be kept for all activities relating to registered blocks. The applicable grower declaration form (Attachments 2.13, and 2.14) for the product must be completed and accompany each consignment of product intended for export.

NOTE: the Queensland Government Department of Agriculture, Fisheries and Forestry previously issued a farm note (F76/DEC92) which detailed requirements for field control programs against infestation of Bactrocera cucumis, these constituted the minimum requirements for the control of fruit fly. This farm note is no longer in print but the requirements are still accepted by the Australian Government Department of Agriculture. Newer chemicals developed and registered for the control of fruit fly may be utilised. All spray programs to meet Department of Agriculture requirements must be carried out at the recommended label rates. All activities relating to field controls must be recorded and held on file for a 12 month period.

Growers are permitted to use the services of a state registered crop monitor. Crop monitors will be responsible for ensuring adequate monitoring records are maintained for each registered grower. Records including spray regime and recommendations must be available to the Department of Agriculture upon request.

NOTE: All cartons of produce must be marked with grower number and packhouse number to enable traceback.

3.4.1 Citrus growers

Citrus fruits have two Risk Group 2 pests—Guignardia citricarpa (citrus black spot) and Phyllocnistis citrella (citrus leafminer) — however, only citrus growers in the state of Queensland where Guignardia citricarpa is found need to be registered. Although growers in the southern states of New South Wales, Victoria and South Australia are not specifically required to be registered for this program, monitoring and spray diaries must be kept.

3.4.2 Avocado growers

All avocados must be sourced from growers and blocks registered with an official tree certification scheme (such as the Avocado Nursery Voluntary Accreditation Scheme or relevant state departments) to ensure freedom from avocado sun blotch viroid and undergone appropriate pest control activities that are effective against or been sourced from an area free (verified by an official detection survey) from cercospora spot blotch (Pseudocercospora purpurea).
In addition to the standard grower requirements listed in Section 3.3, avocado growers must supply the following documented evidence for registration:

a) Grower maps to include indexed and non-indexed fruit;
b) Official verification of orchard freedom from sun blotch viroid;
c) Sterilisation procedures between indexed and non-indexed blocks;
d) Buffer zone/s between indexed and non indexed blocks (i.e. row spacing between blocks); and

e) Pruning procedures to prevent sun blotch viroid re-infestation (i.e. no foliage or fruit contact with soil or neighbouring avocado trees).

NOTE: Further details on avocado accreditation for sun blotch viroid can be sourced from the Australian Avocado Growers Association or State Government Departments of Agriculture (or equivalents).

3.5 Audits

The Department of Agriculture will audit growers to ensure compliance with NZ BQA requirements. Details of these audits can be found in: Table 7 – Audit Frequency

Growers will receive an initial audit prior to season commencement (or early in export season if previously registered subject to conditions above) and one further audit during the season.

For winter window commodities, the Department of Agriculture will undertake monthly audits of the property throughout the growing/harvesting season in the initial season (where substantial compliance is recorded then audit frequency will be reduced to 2 monthly intervals).

The Department of Agriculture will conduct audits of registered growers throughout the growing/harvesting season. All audits of growers will be charged at standard fee for service rates, these details are available from Department of Agriculture regional offices or www.daff.gov.au/fees/biosecurityfees-charges/export.

NOTE: the Department of Agriculture audit regime will usually be intensified during the first season of a new treatment. This increased audit regime is intended to ensure the requirements of the new treatment are being met, and to identify any problems or potential problems with implementing the treatment.

All Department of Agriculture audits will be ‘announced’ audits giving the grower at least two days notice.

Unannounced monitoring audits may be conducted if they are deemed necessary by the Regional Export Manager. Unannounced monitoring audits are not chargeable unless major non-conformities have been recently identified, or are detected during the audit.

Department of Agriculture audits of grower responsibilities may be conducted simultaneously with packhouse and/or exporter audits.

NOTE: Where a grower elects to voluntarily withdraw their registration from the BQA, a written notification of such intent must be provided to the Department of Agriculture regional
office within a minimum of 10 working days prior to the date of effect. Any outstanding audits will be conducted during the 10 working day period.

3.5.1 Non Compliance

If minor non-compliances are detected at audit, corrective action must be taken and a follow up audit will be conducted within 7 days. If major non-compliance is identified, the Department of Agriculture Canberra office must be contacted as soon as practically possible and an assessment will be made with regards to immediate suspension until corrective action has been taken.

A grower found to be not managing orchard(s) in accordance with this manual, through consistent non-compliances, may be suspended from the New Zealand export program.

The timing of the follow up audit is dependent on the problem and its relationship to growing/harvesting of the current crop. Department of Agriculture inspectors will determine if follow up audits are required.

3.5.2 Packhouse Approved Arrangement systems

Where a packhouse has an Approved Arrangement (AA) with the Department of Agriculture and is packing a commodity for which grower registration is required, the packhouse must register and audit growers in the following manner:

   a) On initial registration;
   b) Following registration at least once during the growing season; and
   c) In subsequent seasons once during each growing season.

During Department of Agriculture auditing of AA establishments, a sample of registered growers will be reviewed for compliance with the requirements of the SOM. If a major non-compliance is detected, the suspension of the packhouse may be considered necessary as it is the packhouse that is responsible for ensuring compliance with the Department of Agriculture/New Zealand requirements. Department of Agriculture audits of growers registered by the packhouse will be conducted on the following basis:

   a) In the initial year of registration – 5 per cent of all growers;
   b) Subject to compliance the previous year – 2½ per cent of all growers;
   c) If non-compliances were detected at a previous audit – increase random selection of growers to 10 per cent of all growers.

3.5.3 Security and supervision

Security of commodities requiring field control programs (i.e. Appendix 10), or where the treatment pathway is management practices (i.e. Appendix 2 and 6), will be maintained immediately after harvest. For all other goods, security of the product will occur after post harvest treatment.
SECTION 4 CROP MONITOR RESPONSIBILITIES

4.1 Registration

Crop monitors must register with the Department of Agriculture (Attachment 2.4) to undertake crop monitoring duties for the NZ BQA.

A crop monitor will include in their application, details of relevant registered growers and the commodities covered.

4.2 Audit

Crop monitors will provide registered grower property records upon Department of Agriculture/New Zealand Ministry for Primary Industries (MPI) request. The Department of Agriculture will perform random audits of each registered crop monitor at least once per year/season for each commodity field monitoring service provided. Audits will include randomly selected growers.

If three growers (minimum) are covered by the same crop monitor, and audits reveal substantial compliance, additional grower audits of the crop monitor may be waived by the Export Manager for that year/season.

All audits of crop monitors will be charged at standard fee for service rates.

Where a crop monitor elects to voluntarily withdraw their registration from the BQA, a written notification of such intent must be provided to the Department of Agriculture regional office within a minimum of 10 working days prior to the date of effect.

4.3 Non compliance

If minor non-compliances are detected at audit, corrective action must be taken and a follow up audit conducted within 7 days. If major non-compliances are detected, the Department of Agriculture Canberra office must be contacted as soon as practically possible and an assessment made with regards to immediate suspension until corrective action has been taken.

A crop monitor found to be not meeting responsibilities in accordance with this manual through consistent non-compliances may be suspended from the New Zealand export program.
SECTION 5 PACKHOUSE RESPONSIBILITIES

5.1 General requirements

Packhouses are required to maintain secure conditions for NZ BQA commodities and have documented systems in place to ensure grower identification and segregation is maintained.

All cartons must be marked with a standard trade description in accordance with the Export Control (Plants and Plant Products) Orders 2011 and some form of grower and packhouse identification (including grower and packhouse number if applicable).

In addition to normal Department of Agriculture registration requirements under the Export Control (Plants and Plant Products) Orders 2011, packhouses (where applicable) must be registered specifically for New Zealand. Application for registration (Attachment 2.2) will be made directly to Department of Agriculture regional offices.

5.2 Documentation

Packhouses are responsible for maintaining all documentation, and must provide to the Department of Agriculture the following upon request:

a) Copy of Department of Agriculture endorsed packhouse registration form;
b) List of growers registered with Department of Agriculture who supply to the establishment;
c) Where grower registration is a requirement, a copy of Department of Agriculture endorsed grower registration forms;
d) Receival/despatch records of produce from individual growers.

Export documentation will be held on file for 2 years (minimum) and are subject to Department of Agriculture/New Zealand Ministry of Primary Industries (MPI) audit.

5.3 Delegation of exporter responsibilities

5.3.1 General

Where a packhouse has been delegated exporter responsibilities in accordance with directions contained in the SOM, the packhouse must undertake and record all functions delegated to them. Delegated responsibilities may include:

- The security of cleared/treated produce whilst on premise;
- Supervision of loading and unloading of all consignments into and out of the packhouse premise;
- Clear identification of all New Zealand destined produce;
- Documenting all incoming and outgoing produce intended for export under the NZ BQA; and
- Inspections.

Packhouses will be audited to ensure requirements for these functions are known.
5.3.2 Security and supervision

The exporter delegate (ED) will arrange appropriate transportation of treated products to ensure no cross infestation or substitution can occur.

Security of commodities requiring field control programs (i.e. Appendix 10) or where the treatment pathway is field management practices (i.e. Appendix 2 and 6) will be maintained immediately after harvest. For all other goods, security of the product will occur after post harvest treatment.

Full details of the secured product will be included on a transfer certificate (EX186) and/or Notice of Intention to Export (EX28/RFP). A Department of Agriculture transfer certificate is to be issued for all products travelling interstate. For intrastate travel, a documented pathway is to be approved by the Export Manager in each region. This process will be audited by the Department of Agriculture.

5.3.3 Inspection

The exporter (or exporter delegate) must perform a grower line inspection on all consignments being exported to New Zealand. A copy of grower line inspection records must be presented to Department of Agriculture staff at the time of Department of Agriculture inspection.

Exporter inspection may be undertaken at a packhouse when delegated. See Section 7.2 for more details about exporter delegate inspections. A packhouse inspection will satisfy requirements for an exporter inspection if performed by an approved ED. Inspections must be recorded (refer to Attachment 2.6) and retained for audit purposes. A copy of the inspection record must accompany the consignment to the Department of Agriculture inspection.

If the exporter (or exporter delegate) opts for the Department of Agriculture to carry out a consignment line inspection, then copies of grower line inspection records must be presented to staff at the time of the Department of Agriculture inspection.

5.4 Audit

The Department of Agriculture will audit packhouses to ensure compliance with NZ BQA requirements. Details of these audits can be found in Table 7 – Audit Frequency.

Grower registers, staff training, completion and storage of records and security responsibilities will be audited by the Department of Agriculture. Variance to audit requirements can be made at the discretion of the Export Manager.

AA packhouses will be audited for compliance with the NZ BQA as per the “AQIS Audit Policy for Inspection and Export Certification of Prescribed Goods (Fresh Fruits and Vegetables) Subject to the New Zealand Bilateral Quarantine Arrangement”QOPS Ref. No: E/5004/AP

All audits of packhouses will be charged at standard fee for service rates, these details are available from Department of Agriculture regional offices or www.daff.gov.au/fees/biosecurityfees-charges/export.
Department of Agriculture audits of packhouse responsibilities may be conducted simultaneously with grower and/or exporter audits.

NOTE: Where a packhouse elects to voluntarily withdraw their registration from the BQA, a written notification of such intent must be provided to the Department of Agriculture regional office within a minimum of 10 working days prior to the date of effect. Any outstanding audits will be conducted during the 10 working day period.

5.4.1 Non compliance

If minor non-conformances are detected at audit, corrective action must be taken and a follow up audit will be conducted within 7 days. If major non-conformances are detected, the Department of Agriculture Canberra office must be contacted as soon as practically possible and an assessment will be made with regards to immediate suspension until corrective action has been taken.

A packhouse found to be not managing their establishment in accordance with this manual through consistent non-conformances may be suspended from the New Zealand export program.

5.5 Approved Arrangements – Packhouse

5.5.1 General requirements

The following activities must be undertaken by Approved Arrangement (AA) packhouses:

(a) All individual packages must include grower numbers and packhouse numbers;
(b) Declared fruit fly free area packhouses must have a register of all growers’ names and addresses and allocated grower numbers for all NZ BQA commodities;
(c) Should area freedom suspension zones be established, packhouses must be able to provide separate registers showing growers who are still in area freedom districts against those who are located within the suspension zone(s). Establishment Quality Manuals are required to show procedures for identification, segregation and packing processes to ensure ‘area free’ commodities cannot be contaminated whilst on the establishment and/or surrounds;
(d) It is recommended contingency plans are incorporated within quality manuals to address additional procedures required in the event of fruit fly outbreaks. Whilst each fruit fly outbreak (when they occur) must be considered separately, a generic procedure should be established as a reference;
(e) Packhouses not undertaking official disinfestation treatments and that do not have Risk group 2 or 3 pests; will not need to include additional systems to their Quality Manuals;
(f) Packhouses with Risk group 2 or 3 pests will need to ensure grower registration, commodity segregation; identification and inspections meet the NZ BQA. It is likely some quality manuals will need to be amended or have attached an appendix to meet the new export requirements for NZ BQA;
(g) To gain accreditation, five joint inspections will be undertaken with the Department of Agriculture to assess the ability of packhouse staff to perform inspections in accordance with the directions contained in the SOM.

AA packhouse conducting ‘treatments’ under the NZ BQA must be registered for this purpose in addition to normal registration requirements. Section 6 of the SOM outlines the requirements for Treatment Centres.
5.5.2 Audit

AA packhouses with NZ BQA responsibilities incorporated into their current Quality Manuals will be audited in conjunction with standard auditing requirements.

Those choosing to separate NZ BQA commodity responsibilities from other AA accreditation will have the two systems audited separately but within the usual audit schedules applying to the establishment.

Establishments packing Risk group 2 pests (host commodities) will have a percentage of those registered growers audited to ensure compliance with the NZ BQA.

Packhouses who elect to register growers of host commodities of Quarantine Risk group 2 pests must also conduct audits of all their registered growers in the following manner;

a) On initial registration;
b) Following registration, at least once during the growing season; and
c) Continual registration—once during each growing season.

For Department of Agriculture audits, registered growers will be randomly selected on the following basis;

a) Initial year of registration – 5 per cent of all growers registered by the packhouse;
b) Subsequent growing seasons- 2.5 per cent of all growers registered by the packhouse (subject to compliance from previous year);
c) Non-conformance at a previous audit -10 per cent of all growers registered by the packhouse.

Should a major non-compliance be detected at audit, the packhouses will be suspended from the New Zealand program immediately. Depending on the type of non-compliance, suspension from the Department of Agriculture AA may be considered. Such a decision will be made by the Department of Agriculture AA Contact Officer in conjunction with the Regional Manager and Canberra Office.

5.5.3 Inspection requirements

AA packhouses are permitted to undertake the required inspection regimes as “in-line” processes.

In-line inspection systems will be granted when the AA establishment has systems in place that;

a) Address grower field controls (horticulture extension officers, reference to crop monitors etc.);
b) Have formal receival inspection records;
c) Have sorter and grader recording systems within the processing line to ensure segregation of grower lines.

In order to properly document inspections for NZ BQA commodities, AA packhouse will undertake “in-line” consignment inspections according to the following table;
Table 3  
IN-LINE INSPECTION SAMPLING REQUIREMENTS

<table>
<thead>
<tr>
<th>Inspection type</th>
<th>No. of fruits</th>
<th>Per time period</th>
<th>Over period of time</th>
<th>Total Fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>100</td>
<td>1/2 hour</td>
<td>3 hours</td>
<td>600 units</td>
</tr>
<tr>
<td>(b)</td>
<td>200</td>
<td>hourly</td>
<td>3 hours</td>
<td>600 units</td>
</tr>
<tr>
<td>(c)</td>
<td>100</td>
<td>hourly</td>
<td>6 hours</td>
<td>600 units</td>
</tr>
</tbody>
</table>

Table 3 sets out sampling regimes that can be applied as in-line process controls within an AA packhouse. The maximum continuous time run for New Zealand is a 24 hour process. It is extremely important this type of in-line process control is undertaken and recorded for each consignment run of NZ BQA commodities.

All in-line process controls (Table 3) must be undertaken by a Department of Agriculture Approved Inspector. Where inspections are performed as per Table 3, individual grower line inspections are not required.

During inspection, any fruits/vegetables that are soft, bruised or display rot spots will be cut to determine evidence of fruit fly infestation, and if so, if the infestation is alive or dead. The results of all produce cut will be recorded on the inspection sheets.

Packhouse can make up any type of sampling system based on Table 3. However, packhouse must document what regime is to be used before the initial production run and ensure the sampling regime is representative of the consignment(s) being assembled.

Packhouse requirements pertaining to identification, segregation, security and records for all NZ BQA produce must be part of the Process Management System submitted for Department of Agriculture approval.

**NOTE:** Packhouses will lift 5 per cent of all calyces citrus fruit for the determination of freedom from mealybugs, an RG1 pest.

5.5.4  Documentation

The identity of the exporter, in addition to the grower and packhouse numbers will be included on all packages covered by the NZ BQA.

For produce being transferred intrastate or interstate, documentation will be required to ensure the receiving company and Department of Agriculture inspector can verify security and integrity of the consignment on arrival. A declaration to the following effect will be made on the ‘EX 222’ or internal transfer note as follows:

"The produce covered by this permit has been inspected on a grower line basis (or equivalent) for those quarantine pests categorised by MPI and specified tolerances have not been exceeded."
Where a phytosanitary certificate is to be signed in a state other than the state of production and packing, an official inspection report must be attached to the EX222 or EX186 together with an internal transfer note.

5.5.5 Post treatment security

Where an AA packhouse has accepted exporter delegation for the security, and loading supervision, of NZ BQA commodities, the packhouse will nominate the person(s) who will be responsible for documenting procedures, carrying out, and recording the following:

a) The security of cleared/treated produce whilst on the premises;
b) Supervision of loading and unloading of all consignments into and out of the premises intended for export under NZ BQA;
c) Clear identification of all NZ BQA produce;
d) Documenting all incoming and outgoing produce intended for export to New Zealand.

The exporter/ED will arrange appropriate transportation of certified NZ BQA products to ensure no cross infestation or substitution can occur. Where delegation of loading supervision is undertaken, both the exporter and loading company will have copies of acceptance of duties on file.

For product not being loaded for direct export shipment, full details of the treated product will be included on Transfer Certificate (EX186) or Notice of Intention to Export (EX28) and signed by a Department of Agriculture inspection officer.
SECTION 6     TREATMENT CENTRE RESPONSIBILITIES

6.1 General requirements

Treatment centres must have documented systems of identification, segregation, process controls, post security treatment and supervision responsibilities.

All staff must be appropriately trained to carry out designated responsibilities.

6.2 Registration

In addition to normal Department of Agriculture registration requirements under the Export Control (Plants and Plant Products) Orders 2011, all treatment centres must be registered (Attachment 2.3) specifically for New Zealand. Application for registration will be made directly to Department of Agriculture Regional Offices.

6.3 Audit

The Department of Agriculture will audit treatment facilities to ensure compliance with NZ BQA requirements. Details of these audits can be found in: Table 7 – Audit Frequency.

Product identification, calibration, load out activity, completion and storage of records, and product security responsibilities will be audited by the Department of Agriculture. Records pertaining to these aspects will be checked for accuracy at audit. Variance to audit requirements can be made at the discretion of the Export Manager.

All audits of treatment facilities will be charged at standard fee for service rates.

NOTE: Where a treatment centre elects to voluntarily withdraw their registration from the BQA, a written notification of such intent must be provided to the Department of Agriculture regional office within a minimum of 10 working days prior to the date of effect. Any outstanding audits will be conducted during the 10 working day period.

6.3.1 Non compliance

If minor non-compliance is detected at audit, corrective action must be taken and a follow up audit will be conducted within 7 days. If major non-compliance are detected, the Department of Agriculture Canberra office must be contacted as soon as practically possible, and an assessment will be made with regards to immediate suspension until corrective action has been taken.

A treatment centre found to be not managing their establishment in accordance with this manual through consistent non-compliance may be suspended from the New Zealand export program.

6.4 Post treatment security

6.4.1 Registration

The exporter must nominate, in their application for registration (Attachment 2.5), the person(s) who will be responsible for documenting procedures, carrying out and recording the following:

   a) Security of treated produce whilst on the premises;
b) Supervision of loading and unloading of all consignments into and out of the premises;  
c) Identification and segregation of consignments intended to be treated; and  
d) Documenting all incoming and outgoing produce intended to be exported to New Zealand.

6.4.2 General requirements

Security of commodities requiring field control programs (i.e. Appendix 10) or where the treatment pathway is field management practices (i.e. Appendix 2 and 6) will be maintained immediately after harvest. For all other goods, security of the product will occur after post harvest treatment.

Staff loading containers will ensure minimum time delays in moving commodities from the secure area into container(s). Product must not be left unsecured. Loading procedures must mitigate potential infestation during container loading. If loading at night, lighting must be of a type that does not attract pests (e.g LED).

Approved security measures for security and transportation of produce will include either;

- Full shrink-wrapping and sealing as a palletised unit (including the surface area between the bottom row of cartons and the actual pallet); or
- Full enclosure of each pallet with shade mesh cloth with a maximum opening of 1.6 mm (including the surface area between the bottom row of cartons and the actual pallet), or
- Loading direct into clean panotech vans/containers with units sealed by Department of Agriculture officers; or
- Cool storing unprotected, at temperatures up to 5 °C with a minimum of 1 metre separation between fumigated/treated produce and any untreated product (except commodities treated under area freedom). Signage must be in place in the storage area reiterating this separation requirement; or
- Cool storing protected in secure packages at any temperature (except commodities treated under area freedom).

Should any treatment operator/packhouse or freight forwarder wish to vary the above security arrangements, details of the system of operation should be forwarded to the Export Manager for assessment and approval.

6.5 Post treatment transportation

The exporter/ED will arrange appropriate transportation to ensure no cross infestation or product substitution can occur.

Products transported to another destination for export loading must be subject to strict security provisions. The exporter/ED will ensure the transport medium is clean and other products (i.e. untreated/non-secure commodities), that could cause cross infestation are not loaded without taking appropriate security precautions. That is, either the other commodities are secured or the New Zealand produce is secured (as per Section 6.4.2).

Full details of the secured product will be included on a transfer certificate (EX186) and/or Notice of Intention to export (EX28/RFP). A transfer certificate is to be issued for all products travelling interstate. For intrastate travel, a documented pathway is to be approved by the Export Manager in each region. This process will be audited by the Department of Agriculture.
NOTE: Export Managers may approve variations to the above documentation requirements to suit a particular state's operations. The use of facsimiles for transferring this information is permitted. Where other than official Department of Agriculture documentation is used, it is recommended audits be undertaken frequently to enable confidence within the systems.

Should inspecting officers find breaches to security during transit; consignments will be rejected. For some commodities reconditioning and re-inspection may occur.

The Department of Agriculture will audit load out facilities to ensure compliance is being maintained.

6.6 Treatment Appendices

6.6.1 Appendix 3 – Fumigation

Fumigation practices must be carried out in accordance with the current Department of Agriculture Methyl Bromide Standard. The Standard contains details for effective fumigation procedures and can be found on the Department of Agriculture website.

All fumigations must be performed with the amount of product space equal to or less than 50 per cent of total air space within the chamber/tent. Fumigation treatment requirements are detailed in Table 4.

Table 4 METHYL BROMIDE FUMIGATION TIME/TEMPERATURE DOSE RATES

<table>
<thead>
<tr>
<th>Temperature (flesh)</th>
<th>Dose Rates</th>
<th>Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 – 26 °C and above</td>
<td>32g/m³</td>
<td>Watermelon - 4 hours</td>
</tr>
<tr>
<td>15 °C and above</td>
<td>48g/m³</td>
<td>Strawberry - 3 hours</td>
</tr>
<tr>
<td>≥ 17 °C and above</td>
<td>40g/m³</td>
<td>Capsicum – 2 hours</td>
</tr>
</tbody>
</table>

Note: For capsicum fumigated with methyl bromide in conjunction with appendix 10 and infield controls for yellow peach moth (*Conogethes punctiferalis*), or for capsicum sourced from PFAs where growers are not implementing infield control for yellow peach moth (*Conogethes punctiferalis*), the methyl bromide fumigation option of 32 g/m³ for 2 hours at 21 °C (and above) is acceptable.

Treatment facilities must maintain documented systems. Systems will include:

a) Incoming product identification;
b) Segregation from other produce and clearly marked ‘New Zealand’;
c) Treatment processes and controls. Details of how each incoming consignment is reconciled to each treatment (i.e. batch numbers);
d) Treatment records;
e) How measuring equipment is calibrated, how often and by whom;
f) Security arrangements after treatment;
g) Maintenance of segregation from untreated product;
h) Supervision and security arrangements at loading.
It is recommended individual procedures accompanied by work instructions be written to define the processes and controls. The following criteria should be considered:

a) Address how assessment is made to enable a 50 per cent product capacity, in relation to the overall volume within the chamber or tent;
b) Define how the product will be equally spread throughout the chamber/tent to enable free fumigant flow throughout the stack;
c) How many units will be sampled to measure lowest flesh temperature of product?;
d) If tent fumigation is being performed, by whom and when is the tent checked for holes/tears?;
e) Who, how and when is temperature measuring equipment calibrated? How is this recorded?;
f) Where the in-process gas monitoring lines are located within the stack for verification of fumigant dose rates, and who is responsible for reading and recording this information?;
g) Who checks required fumigation dosage rate once temperature and volume are calculated?;
h) How is it established that circulation fans within the unit are working prior to fumigant entry into the chamber/tent?;
i) Who is responsible for checking the correct amount of fumigant is entered into the chamber/tent?;
j) What procedures are applied to ensure no leaks from the chamber or tent are evident?;
k) What period of time after initial fumigant is released into the chamber/tent will verification readings be made and using what type of equipment?;
l) Calibration of gas measuring equipment is undertaken how frequently and who does this?;
m) Calibration details are recorded where?;
n) At completion of intended treatment, who undertakes verification of gas retention rates, who records this, and where are these records held on file?;
o) Who has the authority to sign off the treatment certificates to enable release of produce?;
p) How is product identified as being treated?

NOTE: Regional Export Managers may approve variations to the above documentation requirements to suit a particular state's operating requirements.

6.6.1.2 Department of Agriculture supervision

Flexible tents - Department of Agriculture inspection staff will attend all fumigations being undertaken for NZ BQA. Inspection staff will attend either at commencement of fumigation or prior to completion. The Department of Agriculture will verify treatment dosages, calculations and gas retention general process controls.

Fixed capacity (chambers or fixed tents) - Treatment centres will be supervised at the commencement of the season, and then, providing substantial compliance is attained 2 - 3 times during the season.

Fumigation centres must advise their regional Department of Agriculture office 24 hours in advance of intended fumigation treatments. If the Department of Agriculture is unable to attend at the required times, arrangements can be made to allow treatment to go ahead but define how the Department of Agriculture will manage the supervision requirements.

NOTE: After treatment all product must be identified as ‘treated’ for identification and traceability purposes.
6.6.2 Appendix 4 – Dimethoate

6.6.2.1 General requirements

Table 5 PERMITTED DIMETHOATE DIPPING/SPRAYING REGIMES

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Dip strength</th>
<th>Tolerance</th>
<th>Dip/spray</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rockmelon</td>
<td>400ppm</td>
<td>±6% (± 24 ppm)</td>
<td>Dip</td>
<td>Submersed for at least 1 minute</td>
</tr>
<tr>
<td>Honeydew melon</td>
<td>400ppm</td>
<td>±6% (± 24 ppm)</td>
<td>Dip</td>
<td>Submersed for at least 1 minute</td>
</tr>
</tbody>
</table>

Note: The minimum tolerance for dimethoate sample results is 376 ppm. Treatment centres will be suspended if samples fall below this level. Treatment centres will only be re-instated once an audit has been conducted to identify the cause of the low concentration. Adequate corrective actions must be documented and instigated by the treatment facility. Reinstatement will occur when the Department of Agriculture has confirmed the adequacy of corrective actions and when the Department of Agriculture is in receipt of a conforming dimethoate sample.

Treatment facilities must maintain documented systems. Systems will include:

a) Chemical to must be used by expiry date;
b) Chemical to be stored at temperatures below 40 °C. It has been determined when temperatures rise above 46 °C (for even 1 day), the active ingredient will degrade;
c) That professional advice (laboratory/manufacturer) has been sought, if using any additives to solution, as these can accelerate the degradation of the active chemical concentrate over time;
d) Procedure that ensures that pH levels are checked and adjusted if required, before adding chemical concentrate, as alkaline conditions have an adverse effect on the solution and will increase with time;
e) All products will be free of soil;
f) The treatment must be the last process prior to packing, i.e. there will be no other washing, cleaning by brushes or fungicide treatments permitted;
g) The treatment centre will nominate a person/s to prepare and record each consignment or batch lot;
h) The treatment centre will prepare treatments immediately prior to use and have systems in place for recording solution strengths. The treatment centre will also record details of the mixing of solution and any topping up during processing which allows for chemical wash out. Details will include times and indicate volumes of product treated at the time of topping up.

Each treatment operator will be required to document their method/s of dipping and must include:

a) Size of the dip tank;
b) Method of dipping (e.g. pallets loaded so many boxes high, bins with the top layer secured by screened mesh etc.);
c) Maximum volume of water required for any/each treatment;
d) Amount of chemical needed to achieve the required ppm level active ingredient;
e) Minimum allowable solution level;
f) Maintenance of active ingredient level (i.e. ‘top up’ levels);
g) Treatment operators will have a system in place identifying treated and untreated products. Labels must be clear and visible on pallets/bins/crates etc;
h) After dipping, all products must be identified as being ‘treated’.

NOTE: Solutions will not be allowed to be carried over to the next day/run unless the treatment centre has established systems demonstrating solution can be carried over without losing efficacy.

After treatment all product must be identified as ‘treated’ for identification and traceability purposes.

6.6.2.2 Waxed produce

The application of waxes or oils prior to dimethoate treatment is prohibited. For treated produce, application of waxes or oils will only be allowed at the discretion of the Export Manager.

6.6.2.3 Sampling

Due to the range of commodities exported under this appendix and their seasonal availability, all sampling regimes within the NZ BQA will be applied within the context of a calendar year (Jan –Dec).

All industry dip samples must be taken at the end of a dipping run. The Department of Agriculture samples where possible (subject to operational constraints), samples will also be taken at the end of a dipping run. This will provide assurances that all product within the dipping process has been exposed to a solution within the required concentration.

There is no requirement for Department of Agriculture inspectors to attend each dimethoate disinfection treatment. Analysis of chemical dipping strengths, must be verified according to the following sampling guidelines:

Department of Agriculture sampling

Initial year of registration: the Department of Agriculture to be in attendance during the preparation of the first dipping solution. A Department of Agriculture dip sample will be taken from this first treatment run. Department of Agriculture dip samples must be taken during every month thereafter, while the treatment facility is dipping for export to New Zealand.

Continuous registration: Sampling may be extended to twice during dipping activities in a calendar year, provided that substantial compliance has been previously established.

Industry sampling

Monthly for the first 3 months of export activity, with one additional sample to be taken if the treatment period is greater than 4 months.

6.6.2.4 Department of Agriculture audit

One initial audit during the first 10 days of each season to verify all responsibilities are being maintained, and in the first year of operation, monthly audits during the operating season.
First year of registration: Monthly during the treatment season.

Continuous registration without non-conformance: Twice during the treatment season.

6.6.3 Appendix 5 – Cold treatment

Citrus fruits, pears, grapes and avocados can be treated by cold storage disinfestation for export to New Zealand.

6.6.3.1 General requirements

Exporters have the option to carry out cold disinfestation treatments on-shore immediately prior to export or in-transit in accordance with the following treatment schedules:

Table 6 APPROVED COLD STORAGE DISINFESTATION TREATMENTS

The core temperature of the fruit to be held continuously at one of the following temperature/time combinations immediately before export or in-transit.

<table>
<thead>
<tr>
<th>Appendix 5–Cold treatment</th>
<th>Treatment rate and duration</th>
<th>Commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard rates</td>
<td>1 °C (±0.2 °C) for 16 days</td>
<td>Avocado (Persea americana)</td>
</tr>
<tr>
<td></td>
<td>0 °C or below for 13 days or 1 °C (±0.6 °C) for 16 days</td>
<td>Grape (Vitis vinifera) Pear (Pyrus sp.)</td>
</tr>
<tr>
<td></td>
<td>0 °C or below for 13 days or 1 °C (±0.6 °C) for 16 days</td>
<td>All Citrus spp. listed in IHS from all Australian areas</td>
</tr>
<tr>
<td>OR (applicable ONLY to citrus originating from fruit fly outbreaks in the area freedom districts/PFAs; Sunraysia – Victoria and New South Wales; Riverland – South Australia; Ord River Irrigation Area – Western Australia)</td>
<td>(Contingency treatment for Queensland fruit fly (Bactrocera tryoni) outbreak in a PFA). 3 °C (±0.5 °C) for 14 days</td>
<td>Grapefruit (Citrus paradisi) Lemon (Citrus limon)</td>
</tr>
<tr>
<td>5a</td>
<td>(Contingency treatment for Mediterranean fruit fly (Ceratitis capitata) outbreak in a PFA). 2 °C (±0.5 °C) for 18 days or</td>
<td>Mandarin (Citrus reticulata) Orange (Citrus sinensis) Tangerine (Citrus reticulata) Tangor (Citrus reticulata x sinensis)</td>
</tr>
<tr>
<td>5b</td>
<td>(Contingency treatment for Queensland fruit fly (Bactrocera tryoni) outbreak in a PFA). 3 °C (±0.5 °C) for 16 days</td>
<td>Grapefruit (Citrus paradisi) Mandarin (Citrus reticulata) Orange (Citrus sinensis) Tangerine (Citrus reticulata) Tangor (Citrus reticulata x sinensis)</td>
</tr>
</tbody>
</table>
### 6.6.3.2 Temperature recorders

Fruit pulp temperature recorders used for cold treatment must conform to the following requirements:

- a) Able to accommodate the required number of sensors;
- b) Able to record and store data for the duration of each treatment until such time the information can be examined by the appropriate authority;
- c) Capable of producing, or can download the information to produce, printouts which identify each sensor, time and temperature, as well as the identification of the recording unit facility/container number where the treatment was undertaken;
- d) Capable of electronically recording readings at least hourly and identifying the time of recording;
- e) Capable of recording temperature data in increments of 0.1 °C.

### 6.6.3.3 Calibration of temperature sensors

The calibration of sensors will be conducted using a slurry of crushed ice and distilled water. At least one minute intervals between two consecutive sensor readings must be allowed during the calibration process; however these intervals must not exceed 5 minutes.

Any sensor which reads outside of the range of ± 0.6 °C from 0 °C must be replaced by a sensor that meets this criterion.

Calibration of temperature sensors must be carried out under the supervision of the Department of Agriculture, with results recorded on Form 2.15 - NZ Fruit Sensor Record of Calibration.

### 6.6.3.4 Loading of containers

Containers must be inspected by the Department of Agriculture or an authorised load out person prior to loading to ensure freedom from pests and to verify that all vents or other potential entry points for pests are covered. Authorised load out persons must record this container check on Form 2.12 Container Report Sheet.

Containers must be fitted with a tamper proof numbered seal placed on the container door upon completion of loading. The seal number must be noted on the Phytosanitary certificate.

### 6.6.3.5 On-shore cold treatments

<table>
<thead>
<tr>
<th>Appendix 5–Cold treatment</th>
<th>Treatment rate and duration</th>
<th>Commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 °C (±0.5 °C) for 20 days</td>
<td>Lemon (<em>Citrus limon</em>)</td>
</tr>
<tr>
<td>5d</td>
<td>(Contingency treatment for Mediterranean fruit fly (<em>Ceratitis capitata</em>) outbreak in a PFA) 2 °C (±0.5 °C) for 16 days or 3 °C (±0.5 °C) for 18 days</td>
<td></td>
</tr>
</tbody>
</table>
On-shore cold treatments are only permitted to be undertaken at treatment facilities registered by teh Department of Agriculture under the NZ BQA. The Department of Agriculture will maintain records of all establishments registered for cold disinfestation.

All staff must be appropriately trained to carry out designated responsibilities.

**Placement of fruit pulp temperature sensors**

A minimum of three sensors, two for pulp and one for air temperature will be used for the first 250 m³ of product or less. For each additional 250 m³ of product, or part thereof, one additional pulp sensor will be used;

- The warmest area of each cool storage facility will be determined during the initial cooling process by the use of sensory probes/thermometers. One pulp sensor will be placed at the warmest area of the cool store. Further sensors will be placed throughout the load in locations representing different areas of the cool store, from midway to the top height of the chamber load. Cartons will be fully closed following insertion of the sensors;
- Care must be taken to ensure that the tip of the fruit pulp temperature sensors are not allowed to extend outside of the fruit.

**Department of Agriculture supervision**

Calibration of sensors for on-shore cold disinfestations must be carried out prior to commencement of treatment and at completion of treatments, with both calibrations supervised by the Department of Agriculture.

If as a result of re-calibration, any sensor produces a different reading than during the initial calibration, a correction factor will have to be taken into consideration when interpreting treatment read-outs. If the application of a correction factor leads to treatment parameters not having been met, the treatment will be deemed to have failed.

Where a treatment has failed, fruit may be re-treated at the discretion of the Department of Agriculture and industry. In circumstances where the Department of Agriculture has documented confirmation that the conditions of the treatment schedule have been maintained since treatment cessation, the treatment may be allowed to continue. Data collection must continue from the time of reconnection of the recording device.

The treatment will be deemed to have begun by the Department of Agriculture once the chamber has stabilised and all sensors have attained the required treatment temperature.

The Department of Agriculture will verify, stamp and sign satisfactorily completed treatment records. Both the Department of Agriculture and the treatment facility are to maintain copies of the treatments on file.

**Record requirements**

Temperature records will be retained and made available for auditing purposes by Department of Agriculture /New Zealand Ministry for Primary Industries (MPI) upon request, details of records must include:
a) Date and results of temperature sensor calibrations;
b) Date chamber was loaded with produce;
c) Type and variety of produce treated, the quantity by lots involved, all to be identified by grower, packhouse and exporter;
d) Continuous print out records of temperatures within the chamber throughout the treatment program;
e) Date produce was cleared from chamber with details of post treatment security and dispatch of produce;
f) Date and results of re-calibration of sensors following completion of treatment;
g) Continuous - electronic data log sheets for each cold treatment;
h) All treated product must be labelled as treated to ensure traceability.

Temperature records will be retained and made available for auditing purposes by Department of Agriculture/MPI upon request.

NOTE: After treatment all product must be identified as 'treated' for identification and traceability purposes.

6.6.3.6 In-transit cold treatments

In-transit cold disinfestation treatments may only be carried out in self refrigerated (integral) shipping containers. These containers must be capable of achieving and maintaining the required cold disinfestation schedules in accordance with the SOM.

Placement of temperature sensors

Containers must be packed in a manner which ensures that there is even airflow under and around all pallets and any loose stacked cartons. Care must be taken to ensure that the tip of the fruit pulp temperature sensors, are not allowed to extend outside of the fruit.

Records of fruit pulp temperatures are required from at least three locations. Sensors will be placed into average sized fruits under Department of Agriculture supervision as follows:

- The sensors must be placed in the following locations in a 40 foot container:
  o Sensor No 1: 1st pallet row, 2-3 cartons down from top, 2-3 cartons in from right side
  o Sensor No 2: 5th pallet row, 4-5 cartons down from top, 3-4 cartons in from left side
  o Sensor No 3: 9th pallet row, 6-7 cartons down from top, 2-3 cartons in from left side.

- The sensors must be placed in the following locations in a 20 foot container:
  o Sensor No 1: 1st pallet row, 2-3 cartons down from top, 2-3 cartons in from right side,
  o Sensor No 2: 3rd pallet row, 4-5 cartons down from top, 3-4 cartons in from left side,
  o Sensor No 3: 5th pallet row, 6-7 cartons down from top, 2-3 cartons in from left side.
On completion of treatments, printouts (or electronic equivalent) of all temperature sensors will be made available to the MPI officer at the port of arrival for final clearance of the container.
Attachment to section 6.6.3.6

SCHEMATIC VIEW OF PLACEMENT OF TEMPERATURE PROBES FOR IN-TRANSIT COLD TREATMENT OF FRUIT FLY HOST COMMODITIES FOR EXPORT TO NEW ZEALAND

Top view of 20/40ft container

Sensor No. 1

Sensor No. 2

Sensor No. 3
NOTE: Any container openings must be covered or fitted with fruit fly proof mesh to prevent the entry of pests. Mesh or gauze with openings ≤ 1.6 mm is acceptable.

6.6.4 Appendix 12 – Irradiation

Refer to section 2.13 Irradiation, for information specifically relating to the approved treatment rates for individual commodities.

The Food Standards Australia & New Zealand (FSANZ) standard for irradiated fresh produce commodities for phytosanitary pest disinfestation has a maximum absorbed dose (Dmax) of 1000 Gy (1 kGy). The requirements (including mandatory labelling) set by FSANZ are applicable for commodities treated under this pathway, these requirements can be found at www.foodstandards.gov.au and www.foodsafety.govt.nz.

Treatment centres will be required to carry out verification testing to determine the required response on target organisms has been achieved in accordance with International Standard Phytosanitary Measures (ISPM) # 18 - *Guidelines for the use of irradiation as a phytosanitary measure* (www.ippc.int). The records of this verification must be made available to the Department of Agriculture/MPI upon request.

Ionizing radiation may be provided by radioactive isotopes (gamma rays from cobalt-60), electrons generated from machine sources (up to 10 MeV), or by x-rays (up to 5 MeV) (limits set by Codex Alimentarius). The unit of measurement for absorbed dose is gray (Gy).

Treatment procedures must ensure the minimum absorbed dose (Dmin) is fully attained throughout the commodity to provide the prescribed level of efficacy. Owing to the differences in the configuration of treatment lots, higher doses may be required to ensure the Dmin is achieved throughout the configured consignment or lot.

NOTE: After treatment all product must be identified as ‘treated’ for identification and traceability purposes.
6.6.4.1  Dosimetry

Dosimetry ensures the required Dmin for a particular commodity was delivered to all parts of the consignment. The following conditions for dosimetry systems must be in place:

a) Capable of recording/measuring the entire range of dosages likely to be received by the product (Dmin & Dmax);
b) Calibrated in accordance with international standards or appropriate national standards (ISO/ASTM 51261 "Selection and Calibration of Dosimetry Systems for Radiation Processing", ISO/ASTM 51204 "Dosimetry in Gamma Irradiation Facilities for Food Processing" and ASTM guide - F1355 "Irradiation of Fresh Fruits as a Phytosanitary Treatment", and ISPM 18);
c) Appropriate for the treatment conditions (ie temperature etc in the treatment chamber);
d) Evaluated for stability against the effects of variables such as light, temperature, humidity, storage time, and the type and timing of analyses required;
e) Consider variations due to density and composition of the material treated, shape and size, orientation of the product, stacking, volume and packaging;
f) Dose mapping of the product in each geometric packing configuration, arrangement and product density used during routine treatments must be carried out prior to the approval of the facility. Only configurations approved by the Department of Agriculture can be used for actual treatments;
g) All components of the dosimetry system must be calibrated according to documented standard operating procedures. An independent organisation recognized by the Department of Agriculture should assess performance of the dosimetry system;
h) An accurate measurement of absorbed dose in a consignment is critical for determining and monitoring efficacy and is part of the verification process. The required number, location and frequency of these measurements should be prescribed based on the specific equipment, processes, commodities, relevant standards and phytosanitary requirements.

6.6.4.2  Dose Mapping

a) Dose mapping studies must be conducted to fully characterize the dose distribution within the irradiation chambers and commodity, and demonstrate the treatment consistently meets the prescribed requirements under defined and controlled conditions. Dose mapping data from a minimum of three runs on any particular configuration must be provided to the Department of Agriculture for verification of Dmin points etc. A minimum of three runs in a physical configuration is required for verification of Dmin (standard);
b) Dose mapping must be done in accordance with documented (proven) standard operating procedures. The information from the dose mapping studies is used in the selection of locations for dosimeters during routine processing;
c) Independent dose mapping for incomplete (partially-filled) as well as first and last process loads is required to determine if the absorbed-dose distribution is significantly different from a routine load and to adjust the treatment accordingly.

6.6.4.3  Facility records and traceability

Treatment facility operators must keep and maintain records addressing the areas listed below:
a) Appropriate treatment records for phytosanitary purposes must be kept by the irradiation facility to ensure traceability of treated lots. Records for every treatment must be kept;
b) Dosimetry records must be kept by the treatment facility for at least one full year after treatment. Records must be made available to the Department of Agriculture on request.

Records kept by treatment centres should also address the following:

a) Identification of facility and responsible parties;
b) Purpose of treatment;
c) Target regulated pest(s);
d) Lot size, volume and identification, including number of articles or packages;
e) Identifying markings or characteristics;
f) Quantity in lot;
g) Absorbed doses (target and measured);
h) Date of treatment;
i) Observed deviations from treatment specification.

6.7 Table grape fumigation requirements – Treatment for disinestation of redback spiders - *Latrodectus hasselti*

6.7.1 General requirements

The New Zealand Ministry of Health have declared Australian redback spiders a pest of human health concern.

MPI have directed the Department of Agriculture to either undertake stringent field control programs to eliminate this pest or an agreed treatment effective against redback spiders. The Australian tablegrape industry has opted for mandatory fumigation using a sulphur dioxide–carbon dioxide treatment.

In addition to treatment centre registration, fumigators must be licensed by their appropriate State Department Authority for the use of sulphur dioxide-carbon dioxide fumigants.

Treatment centres carrying out fumigations on tablegrapes must meet the general requirements outlined above for treatment centres and the listed criteria detailed in Section 6.6.1 of the SOM.

6.7.2 Treatment

The mandatory fumigation treatment for redback spiders is a mixture of 1 per cent sulphur dioxide (SO₂) with 6 per cent carbon dioxide (CO₂) at ambient temperature (above 18 °C) for a period of 30 minutes.

1 per cent sulphur dioxide equals 27.174 grams of sulphur dioxide per cubic metre.
6 per cent carbon dioxide equals 109.69 grams carbon dioxide per cubic metre.

Department of Agriculture inspection staff must sight fumigation treatment records to enable phytosanitary certification of table grapes.
6.7.3 Traceability

If a live redback spider is detected during inspection, systems must be in place to allow trace back to individual fumigation treatments.

6.7.4 Additional precautionary measures

Unused packaging carried over to the following season presents an additional pathway for the introduction of redback spiders into New Zealand.

When carrying unused table grape packaging over, either pest-proofing or disinfestation of the packaging is necessary.
SECTION 7 EXPORTER RESPONSIBILITIES

7.1 General requirements

All exporters of NZ BQA products must be registered with the Department of Agriculture. Exporter applications (Attachment 2.5) will be made to the appropriate regional Department of Agriculture office.

Applications for registration will include details of the commodities and treatment pathways the exporter intends to use to meet with conditions stipulated in the SOM.

The Department of Agriculture will accept the application if details of treatment centres are not known at the time, but exports of the particular commodities will not be permitted until relevant information is provided to the Department of Agriculture.

Exporters are responsible for ensuring that all parties engaged as part of their export pathway, are registered by the Department of Agriculture (where applicable) for specific purposes in accordance with the SOM.

Regional Department of Agriculture offices will endorse BQA registration forms once a registration status has been granted. The endorsed forms will be held by the issuing Department of Agriculture office, with a copy provided to the applicant.

Exporters engaging a BQA registered party, must have a copy of the endorsed Department of Agriculture registration form on file for auditing purposes. Failure by an exporter to engage a Department of Agriculture registered party for specific purposes in accordance with the SOM, may result in a suspension of their export registration status.

Exporters must ensure at all times either directly or by delegation:

a) Product security during loading, transport and export consignment consolidation is not compromised and there can be no substitution or cross infestation of product following treatment;

b) Exporter inspection requirements as detailed in the SOM are performed by qualified staff and records are kept for all inspections performed;

c) Inspection records are given for each grower line presented for Department of Agriculture inspection;

d) Liaison with Department of Agriculture /State Officers takes place as necessary to advise of product movement and inspection requirements;

e) Documentation, including phytosanitary certificate endorsements are maintained.
7.2 Exporter Inspection

The exporter (or exporter delegate) must perform a grower line inspection on all consignments being exported to New Zealand, with full details of the inspection to be recorded (Attachment 2.6). A copy of grower line inspection records must be presented to staff at the time of Department of Agriculture inspection.

Exporter inspections must be undertaken at an appropriate sampling rate, as given in Table 1 of the SOM. Exporters need to ensure all staff they delegate inspection duties to, have been audited and approved by the Department of Agriculture.

If the exporter (or exporter delegate) opts for the Department of Agriculture to carry out a consignment line inspection, copies of grower line inspection records must be presented to staff at the time of the Department of Agriculture inspection.

During exporter inspections, any soft, bruised, rotted, holed or punctured products will be cut to determine evidence of fruit fly infestation. Results of products cut will be noted on the inspection record. A copy of this record must be presented with the consignment for Department of Agriculture inspection. Inspection records together with other documentation relating to the consignment must be held on file for 2 years and is subject to Department of Agriculture /New Zealand Ministry for Primary Industries (MPI) audit.

All inspections, will be performed in an area with a minimum lighting of 600 lux and include the use of magnifying lens x10.

NOTE: Accredited establishments are not required to undertake end-point inspections if procedures enable a 600 unit in-line inspection and the establishment has field control programs, receival inspections and sorter and grader assessments as part of their quality manual.

7.2.1 Split consignment inspections

Following exporter/ED grower line inspections, exporters can elect a Department of Agriculture ‘consignment’ inspection even if the ‘consignment’ is to be split to varying destinations and differing times to New Zealand.

Where this procedure is adopted, the exporter will maintain consolidated records for all 'consignment' inspections and detail how each inspected 'consignment' was distributed, including the distribution of any produce not forwarded to New Zealand (that is, sold on the domestic or other export markets). New Zealand will inspect as individual consignments on arrival.

NOTE: ‘Split consignment’ procedures cannot be implemented until the Department of Agriculture has approved the necessary documentation and record keeping systems.

Exporters/importers wanting to reduce MPI on arrival inspections of split consignments must adopt a system which fully documents the management procedures. Any procedure must include:

a) Notification of consignment details to MPI as they occur;
b) New Zealand communication links (importer and MPI contacts);
c) Flow chart detailing how the phytosanitary certificate moves through the system.
7.3 Documentation

The identity of the exporter, in addition to the grower and packhouse numbers, will be included on all packages covered by the NZ BQA.

A declaration to this effect will be made on the Notice of Intention to Export (Export Permit) (EX28), or EX186 (if appropriate), or in the Exporter Declaration/Comments box in an RFP as follows:

“The produce covered by this permit has been inspected on a grower line basis (or equivalent) for those quarantine pests categorised by NZ MPI and specified tolerances have not been exceeded”

It is important that all manual phytosanitary certificates are given a unique number. Where several export consignments are drawn from a single EX28, the exporter must maintain a documented link to the EX28. This system must be approved by the Regional Export Manager.

Trace back for electronic phytosanitary certificates drawn from several RFPs is obtained through the EXDOC system.

7.4 Rejected produce

If any stages of live fruit fly are found during an exporter/ED inspection, all produce from that grower line (even if previously passed but not shipped) will be securely segregated from all other NZ BQA produce, and identified as not suitable for export to New Zealand unless treatment is available under Appendix 12 (select commodities).

The exporter or ED must immediately notify the Department of Agriculture of the detection.

The Department of Agriculture will formally advise and suspend the relevant treatment centre pending an audit. Should the audit reveal deficiencies that can be corrected, or not find any substantial reason for live fruit fly detection, reinstatement for the NZ BQA may be permitted.

Should during the exporter/ED inspection, detection be made of Risk Group 2 pests, the exporter will immediately advise the Department of Agriculture. The product must be identified as failed for export to New Zealand and segregated from all other NZ BQA products. Reconditioning of consignment may occur where applicable.

The Department of Agriculture will formally advise and suspend the relevant grower pending an audit. Should the audit reveal deficiencies that can be corrected, or not find any substantial reason for the occurrence, reinstatement for the NZ BQA may be permitted.

The mutual fumigation recognition arrangement can be used when regulated pests are detected. This arrangement cannot be used as a pre-emptive measure.

Note: Irradiation treatment: If live arthropods (including fruit fly) are found on product that has been irradiated, this will not result in rejection of the consignment if the requisite irradiation rate has been applied (check section 2.13 for exceptions).
7.5 Security of produce

Export shipping or airfreight containers will be inspected by a freight forwarding agent where delegated or exporter for cleanliness and condition (any container openings must be covered or fitted with fruit fly proof mesh to prevent the entry of pests. Mesh or gauze with openings ≤ 1.6 mm is acceptable).

Container inspections can be delegated to a container park. Persons carrying out inspections must be audited to ensure they are aware of their responsibilities. If inspections are carried out at a container park, copies of completed inspection records must be faxed (or sent with container documents) to point of loading and retained on file by both the container park and exporter/freight forwarder etc.

NOTE: It is only necessary to complete the ‘Container report sheet’ for shipping containers.

All shipping or airfreight containers must be clean, structurally sound and able to protect the produce from contamination from insects and other foreign substances.

7.6 Audit

Exporters will undergo one audit per year. All relevant documentation for NZ BQA consignments must be made available to the Department of Agriculture upon request.

Records may include grower/packer registrations, delegation of exporter inspection responsibilities, delegation to perform exporter load out security requirements, records of exporter inspections and documentation (i.e. RFPs, EX186, EX28 and phytosanitary certificates).

Persons approved to act as an ED will undergo two audits per year. Audits will include documentation, knowledge of regulated pests, inspection techniques, sample selection and knowledge of relevant parts of the SOM.

NOTE: Where an exporter elects to voluntarily withdraw their registration from the BQA, a written notification of such intent must be provided to the Department of Agriculture regional office within a minimum of 10 working days prior to the date of effect.

7.6.1 Non-compliance

If minor non-compliance is detected at audit, corrective action must be taken and a follow up audit will be conducted within 7 days. If major non-compliances are detected, the Department of Agriculture Canberra office must be contacted as soon as practically possible and an assessment will be made with regards to immediate suspension until corrective action has been taken.

An exporter found to be not managing responsibilities in accordance with this manual through consistent non-compliance may be suspended from the New Zealand export program.
SECTION 8  GOVERNMENT RESPONSIBILITIES

This section details the responsibilities associated for participants under the SOM to ensure requirements of the SOM are adhered to.

All systems will be subject to random audits by the Department of Agriculture Canberra office and the New Zealand Ministry for Primary Industries (MPI) will audit systems at frequent intervals. The audits will include measurement of pathway compliance from growers (where required) through to final export container loading and associated documentation.

8.1 Department of Agriculture Horticulture Export Program structure

The Department of Agriculture organisation structure and management flow chart is provided below. It is recommended that each Department of Agriculture Regional office develop its own organisation structure and management flow chart as it will apply to the management of the NZ BQA, and include this information for distribution within that state.

8.1.1 Director – Horticulture Export Program

Will be responsible for ensuring;

a) All components of the SOM are being complied with consistently, over all commodities and treatments through all states;
b) Regular audits of State Departments (where applicable) and Department of Agriculture systems are conducted by the Department of Agriculture Canberra Office to ensure compliance with the conditions and requirements of the NZ BQA and that a proper record management system is available and easily accessible;

c) The Department of Agriculture Regional offices are conducting audits of AA as detailed in the “AQIS Audit Policy for Inspection and Export Certification of Prescribed Goods (Fresh Fruits and Vegetables) Subject to the New Zealand Bilateral Quarantine Arrangement” OPS Ref. No: E/5004/AP and the requirements of the NZ BQA and this manual;

d) Where non-compliances are found, that suitable corrective action is undertaken and verified by the Department of Agriculture;

e) Collate and circulate up to date national lists for specific commodities of registered growers, packers, and of all treatment centres and exporters;

f) That all amendments to this manual are completed promptly and amendments are distributed and acknowledged by holders of the controlled copies;

g) That audits of the South Australia, Victoria and New South Wales State Departments of Agriculture (or their equivalents) fruit fly area freedom trapping and monitoring regimes are conducted at a frequency that ensures confidence in the Department of Agriculture area freedom certification.

8.2 Department of Agriculture Regional Offices

Department of Agriculture regional offices, through the Regional Managers and Export Managers located in Queensland, New South Wales, Victoria, Northern Territory, Western Australia, Tasmania and South Australia are responsible for the following:

a) The daily management and supervision where required, of all components of the NZ BQA and the directions given in the SOM;

b) Ensure all exporters, treatment centres, packhouse and growers (where applicable), are meeting the requirements of the NZ BQA and the directions contained in the SOM;

c) Ensure inspection staff are trained in the terms, responsibilities, and conditions for all NZ BQA commodities being exported from that state;

d) Ensure all required components of the export pathways for commodities are registered for that state;

e) Ensure audits (including internal audits), are being conducted at the correct frequency and the measurement of the system and corrective action where required, has been effected and recorded;

f) Ensuring Canberra Office (Horticulture Export Program Director) is informed where any breaches of the conditions of this manual are observed;

g) Ensuring all inspectors in their state, involved in the NZ BQA export pathways, are immediately informed of any conditions and/or restrictions when fruit fly outbreaks are reported in any district of Australia;

h) Develop a system of recording registrations, and that such records are maintained so they are auditable;

i) Ensuring the Canberra office has copies of all registered elements of the export pathways (as required) and is forwarded details of any amendments to these lists.
8.2.1 Registration requirements

Department of Agriculture offices will implement a registration system where applicable for all growers, packhouses, treatment centres and exporters.

8.2.2 Sampling requirements

For the purpose of the treatments detailed in this manual the decision on whether to inspect produce before or after the appropriate treatment can be made by the relevant exporter/inspector to suit local requirements.

8.2.3 Department of Agriculture inspection procedures

Exporters will provide Department of Agriculture with exporter/ED inspection records prior to inspection. If all export documentation is not provided or incomplete, the consignment will not be inspected.

If the exporter (or exporter delegate) opts for Department of Agriculture to carry out a consignment line inspection, copies of grower line inspection records must be presented to staff at the time of Department of Agriculture inspection.

Inspections performed by the Department of Agriculture will be recorded on ‘Inspection Record - New Zealand’ (Attachment 2.6).

NOTE: Alternative types of inspection records can be used as long as they contain the information supplied on the inspection record

Department of Agriculture inspectors must conduct inspections at the same sampling rate (Table 1) undertaken by the exporter/ED.

For inspection on a consignment basis, produce can be from multiple grower/packer combinations but will belong to only one treatment pathway.

Packaging must be checked during the inspection for compliance with the Export Control (Plants and Plant Products) Orders 2011 and requirements of the SOM.

NOTE: Department of Agriculture will lift 5 per cent of all calyces in citrus fruit for the determination of freedom from mealybugs, an RG1 pest.

On the irradiation pathway, Appendix 12, inspection may be conducted pre treatment OR post treatment.

8.2.4 Consignment line samples

Following exporter/ED inspections, exporters are permitted to present consignment lines to the Department of Agriculture for inspection and phytosanitary certification. Consignment lines consist of commodities from a common treatment pathway (can be different growers).

Where there is more than one grower or commodity presented for Department of Agriculture inspection, the inspector should select sample cartons on the basis of the commodities which may
present the greatest risk. The following points may be taken into account in determining selection of sample cartons:

- From the grower submitting the largest grower line within the consignment
- From the commodity comprising the greatest quantity in the consignment line
- At least one carton from the commodity seen to present the greatest quarantine risk
- At least one carton from any known ‘poorer’ performing growers/packers or from a newly registered grower or packer.

Consignment lines passed after ‘inspection will be identified as ‘Passed for New Zealand’ and immediately segregated. It is recommended exporters implement a system (i.e. stickers on pallets) to make identification of passed consignments easier.

### 8.2.5 Rejection procedures

A rejection upon inspection by Department of Agriculture of either a consignment or grower line does not necessarily indicate a packhouse or grower has breached the conditions of the NZ BQA. However the rejection does indicate a possible problem within the packer/exporter system and will be recorded.

All rejections are to be recorded on Department of Agriculture Form EX161 (Inspection Advice) and must detail the grower, packer and export pathway through which the commodity has passed.

Exporters/EDs who fail two inspections in any one season must be audited immediately. This will ascertain any reasons the Department of Agriculture may consider necessary for suspension or corrective actions to be undertaken.

The following conditions will apply for Department of Agriculture inspection rejected products:

**Any rejection for RG3 pests** - Immediate suspension of treatment centre (if inspection was undertaken post-treatment), and the possible suspension of other elements of the export pathway as may be determined by audit. In the case of ‘Area Freedom’, all districts in that state are suspended. Audit/s must be undertaken at the earliest opportunity.

- Under the irradiation pathway, Appendix 12, the detection of an RG3 pest does not result in the suspension of the treatment centre. Irradiation at 150 Gy is deemed effective for RG3 pests.

**Any rejection for RG2 pests** – Department of Agriculture Canberra office to be informed immediately to consider if audit of grower, packer, exporter or ED is necessary. This may depend on type and quantity of infestation detected. If applicable, the exporter can choose to undertake corrective action (i.e. treatment, withdrawal of the offending grower). e-inspection must be conducted by exporter/exporter’s delegate prior to presenting for Department of Agriculture inspection.

- Under the irradiation pathway, Appendix 12, the detection of an RG2 pest does not result in the requirement to undertake corrective action, (except where an RG2 vector is detected).

**Any rejection for RG1-regulated pests** - The consignment can be totally withdrawn or corrective action undertaken. Corrective action can include treatment, withdrawal of the offending grower. Re-
inspection must be conducted by exporter/exporter’s delegate prior to presenting for Department of Agriculture inspection.

- Under the irradiation pathway, Appendix 12, the detection of an RG1 pest does not result in the requirement to undertake corrective action, (except where an RG1 vector or a pathogen is detected). If an RG1/regulated pest under the irradiation pathway is detected at Department of Agriculture inspection, pre or post treatment, 400 Gy will be required to be applied to the consignment as an effective treatment.

8.3 Audit

Department of Agriculture inspection staff will conduct audits of applicable growers, packhouse, treatment centres, exporters and exporter’s delegates to ensure compliance with relevant section of this manual.

8.3.1 Audits after product rejections by the Department of Agriculture

Should an audit be considered necessary after rejection by a Department of Agriculture officer, the following details will be investigated:

a) Exporter/delegate inspection records;
b) Grower pest monitoring records and pest control diaries (commodity specific);
c) Packer training and associated pest identification;
d) General hygiene of premises;
e) Segregation and identification of produce;
f) Staff responsibilities;
g) Exporter or exporter’s delegate inspection procedures and pest/weed identification skills.

Should auditing fail to identify any breach of the NZ BQA and responsibility of the SOM, all parties will be reinstated.

Copies of audit reports will be placed on relevant grower, packer and/or exporters files.

Results of audits will detail findings and be forwarded to the Export Manager who will co-ordinate necessary action and advise all parties at the earliest opportunity.

Copies of any audit will be given to the relevant components of the pathway audited and kept on file.

Inspectors undertaking these audits must be appropriately trained and accredited.
Table 9  DEPARTMENT OF AGRICULTURE AUDIT FREQUENCY

<table>
<thead>
<tr>
<th>Role</th>
<th>Initial Year of registration</th>
<th>Continuous Registration</th>
<th>Winter Window</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grower</strong></td>
<td>Initial audit prior to export + One additional audit during export period within calendar year</td>
<td>One audit early in new export period (no initial audit required)</td>
<td>Monthly audits of property &amp; spray diaries</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>* Audits extended to 2 monthly if substantial compliance is shown</td>
</tr>
<tr>
<td><strong>Packer</strong></td>
<td>Initial audit prior to export + One additional audit during calendar year</td>
<td>Minimum one audit annually</td>
<td></td>
</tr>
<tr>
<td><strong>Treatment Centre</strong></td>
<td>Monthly audits required in first year</td>
<td>Fumigation - One annual audit in first 10 days of export period (to be conducted during a treatment) + 2-3 times during remainder of treatment period within calendar year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dimethoate - One initial audit during the first 10 days of season + monthly audits for remainder of calendar year whilst conducting treatments</td>
<td>Cold Storage – One annual during first 3 treatments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Irradiation – One initial audit during the first 10 days of season + two audits for remainder of calendar year</td>
<td>Dimethoate – Two audits per calendar year if substantial compliance is shown</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Irradiation – Two audits per calendar year if substantial compliance is shown</td>
<td></td>
</tr>
<tr>
<td><strong>Exporter Delegate</strong></td>
<td>Initial audit prior to export + One additional audit during remainder of calendar year</td>
<td>Minimum two audits per year If fail at two Department of Agriculture end point inspections, immediate audit required</td>
<td></td>
</tr>
<tr>
<td><strong>Exporter</strong></td>
<td>One audit Annually</td>
<td>One audit Annually</td>
<td></td>
</tr>
<tr>
<td><strong>Crop monitor</strong></td>
<td>One Audit Annually</td>
<td>One audit Annually</td>
<td></td>
</tr>
</tbody>
</table>
8.4 Fruit fly area freedom – State Departments

State Departments are responsible for the following:

a) Where required, ensure the implementation of fruit fly trapping, monitoring and surveillance is being performed in accordance with the requirements of individual state management plans (as submitted to MPI), the Code of Practice for the Management of Queensland Fruit Fly, and the requirements of MPI Biosecurity Authority Standards 158.03.06 and 158.03.07; and

b) Report any detections of economically significant fruit fly species found within trapping grids to the Department of Agriculture Canberra Office within 24 hours of identification.

8.4.1 Validation of area freedom

The following procedures are undertaken to validate area freedom:

a) Maintenance of on-going fruit fly monitoring and records to demonstrate area freedom. The procedures and controls are documented such that they can be readily demonstrated to, and audited by the Department of Agriculture Canberra Office and MPI to meet the stipulated Australian and New Zealand Standards;

b) Internal quarantine arrangements to restrict the movement of fruit flies and untreated host material into the free area, with appropriate legislation to back up the monitoring program, and to enforce the internal quarantine security at all times;

c) Trapping and monitoring programs as recommended in the Code of Practice for the Management of Queensland Fruit Fly and managed under the tri-state agreement between the states of New South Wales, Victoria and South Australia and;

d) Reflect the requirements of New Zealand MPI Biosecurity Authority Standard 158.03.06., the Control of Fruit Flies within a Geographical Area of a Country where Fruit Flies are known to occur and/or;

e) Management and control procedures for each area which have been accepted by MPI as meeting all the requirements (or equivalence) with the MPI Biosecurity Authority Standard 158.03.06;

f) State Departments must advise the Department of Agriculture Canberra Office of any amendments to their management procedures at the earliest opportunity. Canberra Office will forward amendments to MPI. Canberra will audit the management practices for fruit fly trapping on a regular basis (minimum annually), against the current copy of the State Department procedures documents, the Code of Practice for the Management of Queensland Fruit Fly and where applicable MPI Biosecurity Authority Standard 158.03.06.
8.4.2 Trapping

All trapping grids for fruit fly control on the Australian mainland (where area freedom has been approved) must be performed as detailed in the *Code of Practice for the Management of Queensland Fruit Fly*.

The servicing and inspection frequency will be as directed in the *Code of Practice for the Management of Queensland Fruit Fly*.

Trapping in Tasmania is centred on ports and airports to detect the entry of any flies that may have been transported from the mainland. A total of 650 Jackson traps baited for Queensland fruit fly and Mediterranean fruit fly are located in these areas.
AVOCADO
Persea americana

Avocados can be exported to New Zealand under Appendices 2 (Area Freedom) and 5 (cold storage disinfestation) to the NZ BQA.

Growers and packhouse must be registered to grow and pack avocados for export to New Zealand because of the orchard management controls that must be implemented for the Risk group 2 pests *Pseudocercospora purpurea* (cercospora spot blotch (CSB)) and sun blotch viroid (SBV).

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

Regulated pests (actionable)

Quarantine: Risk group 3 pests (actionable) – Mandatory Treatments

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Diptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Tephritidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bactrocera aquilonis</em></td>
<td>fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera neohumeralis</em></td>
<td>lesser Queensland fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera tryoni</em></td>
<td>Queensland fruit fly</td>
</tr>
<tr>
<td><em>Ceratitis capitata</em></td>
<td>Mediterranean fruit fly</td>
</tr>
</tbody>
</table>

Quarantine: Risk group 2 pests (actionable) – Management Control Systems

Fungus

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales

Dematiaceae

*Pseudocercospora purpurea*

Virus

avocado sun blotch viroid
Quarantine: Risk group 1 pests (actionable): Nil permitted in ≤ 600-unit sample. Treatments (where applicable) allowed as corrective action.

Insect

Insecta
  Coleoptera
   Cerambycidae
     Mesolita lineolata longhorn beetle
     Prosoplius torosa longhorn beetle
   Chrysomelidae
     Aulacophora hilaris pumpkin beetle
     Monolepta australis red-shouldered leaf beetle
     Poneridia australis fig beetle
     Rhyparida spp. leaf beetles
   Curculionidae
     Leptopius tetraphysodes fruit tree root weevil
     Leptopius tuberculatus fruit tree root weevil
     Neomerinnetes flindersiae weevil
     Paleticus sp. avocado bark beetle
     Sternocorynus sp. weevil
   Scarabaeidae
     Anoplognathus punctulatus scarab beetle
     Diphuscephala spp. green scarab beetles
     Protaelia fusca mango flower beetle
   Tenebrionidae
     Lagria cyanea honeybrown beetle
   Unknown Coleoptera
     Isacantha rhinotioides belid beetle
  Diptera
   Tephritidae
     Dirioxa pornia island fruit fly
  Hemiptera
   Coreidae
     Amblypelta lutescens fruit-spotting bug
     Amblypelta nitida fruit-spotting bug
     Dasynus fuscescens fruit-spotting bug
     Mictis caja fruit-spotting bug
   Lygaeidae
     Nysius clevelandensis grey cluster bug
     Nysius vinitor Rutherglen bug
     Oxyacarrenus arctatus coon bug
     Oxyacarrenus luctuosus cotton seed bug
   Miridae
     Helopeltis sp. mirid
   Pentatomidae
     Plautia affinis green stink bug
   Homoptera
   Aleyrodidae
     Aleurocanthus spiniferus orange spiny whitefly
   Coccidae
     Ceroplastes rubens red wax scale
**Diaspididae**  
*Abgrallaspis cyanophylli* cyanophyllum scale  
*Chrysomphalus aonidum* Florida red scale  
*Chrysomphalus dictyospermi* dictyospermum scale  
*Fiorinia fioriniae* fiorinia scale  

**Flatidae**  
*Siphanta galatea* planthopper  

**Hymenoptera**  
**Formicidae**  
*Camponotus* spp. carpenter ants  
*Myrmecia* spp. bulldog ants  

**Lepidoptera**  
**Geometridae**  
*Cleora inflexaria* grey looper  
*Cleora repedita* looper  
*Ectropis camelaria* ectropis looper  
*Eucyclodes pieroides* bizarre looper  
*Gymnoscelis lophopus* looper  
*Lophodes sinistraria* brown looper  

**Lymantriidae**  
*Acyphas leucomelas* omnivorous tussock moth  
*Euproctis lutea* Turkestan brown-tail  
*Euproctis sp.* browntail moth  
*Olene mendoza* tussock moth  
*Olene ostracina* tussock moth  
*Orgyia australis* vapourer moth  
*Orgyia papuana* painted pine moth  

**Noctuidae**  
*Erygia apicalis* noctuid moth  

**Papilionidae**  
*Graphium eurypylus* paledgreen triangle butterfly  

**Psychidae**  
*Oiketicus elongatus* Saunders’ case moth  

**Pyralidae**  
*Conogethes punctiferalis* yellow peach moth  

**Tortricidae**  
*Cryptophlebia ombrodelta* litchi fruit moth  
*Cryptoptila immersana* ivy leafroller  
*Epiphyas spp. (except E. postvittana)* leafrollers  
*Homona spargotis* avocado leafroller  
*Isotenes miserana* orange fruitborer  
*Lobesia sp.* European grape berry moth  

**Thysanoptera**  
**Thripidae**  
*Selenothrips rubrocinctus* redbanded thrips  

**Mite**  
**Arachnida**  
**Acarina**  
**Tetranychidae**
Fungus

Ascomycota
Phyllachorales
Phyllachoraceae
Glomerella cingulata (anamorph Colletotrichum gloeosporioides)

anthracnose

Mitosporic Fungi (Coelomycetes)
Sphaeropsidales
Sphaerioidaceae
Phomopsis perseae

Regulated non-quarantine pests

None

Regulated non plant pests/unwanted organisms

None

Non-regulated pests (non-actionable)

Non-regulated non-quarantine pests

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
</table>

Insect

Insecta

Coleoptera
Curculionidae
Asynonychus cervinus

Hemiptera
Pentatomidae
Nezara viridula

green vegetable bug

Homoptera
Coccidae
Ceroplastes ceriferus

Ceroplastes destructor

Coccus longulus

Saissetia coffeae

Diaspididae
Aspidiotus nerii

Hemiberlesia lataniae

Lindingaspis rossi

Ricanidae
Scolypopa australis

Lepidoptera
Tortricidae

75
Epiphyas postvittana  
light brown apple moth

Thysanoptera
Thripidae
Heliothrips haemorrhoidalis  
greenhouse thrips

Mite

Arachnida
Acarina

Taronemididae
Polyphagotarsonemus latus  
broad mite

Tetranychidae
Eotetranychus sexmaculatus  
sixspotted mite
Tetranychus urticae  
two-spotted spider mite

Fungus

Ascomycota
Dothideales

Botryosphaeriaceae
Botryosphaeria dothidea  
(anamorph Fusicoccum aesculi)

Leotiales
Sclerotiniaceae
Botryotinia fuckeliana  
(anamorph Botrytis cinerea)  
ear rot

Mitosporic Fungi (Coelomycetes)
Sphaeropsidales

Sphaerioidaceae
Lasiodiplodia theobromae  
stem-end rot

Unknown Coelomycetes

Non-regulated non plant pests/organisms

None
BANANA
Musa spp.

Bananas can be exported to New Zealand under Appendix No. 6 – Non Host Status of the NZ BQA when harvested in the unripe ‘mature green’ stage of maturity.

Growers and packhouses need to be specifically registered for the New Zealand export program.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a regulated pest until official categorisation has been determined by the Department of Agriculture/MPI.

Maconellicoccus hirsutus (pink hibiscus mealybug) is listed for bananas, and the Department of Agriculture can certify freedom from this pest based on the following:

<table>
<thead>
<tr>
<th>Maconellicoccus hirsutus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In field controls for Maconellicoccus hirsutus species are a requirement of grower registration, as such pink hibiscus mealybug will be controlled at the grower level.</td>
</tr>
<tr>
<td>2. If grower is not carrying out infield controls for Maconellicoccus hirsutus fruit will be fumigated with methyl bromide (at appropriate rates) prior to export.</td>
</tr>
<tr>
<td>3. Pre-export inspection of fruit will identify the presence of M. hirsutus, and the fruit would be rejected for export to New Zealand.</td>
</tr>
</tbody>
</table>

Regulated quarantine pests (actionable)

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cercospora hayi</td>
<td>diamond spot</td>
</tr>
<tr>
<td>Chaetothyrisa musarum</td>
<td>sooty blot</td>
</tr>
<tr>
<td>Cladosporium spp.</td>
<td>cladosporium mould</td>
</tr>
<tr>
<td>Glomerella cingulata var. minor (anamorph</td>
<td>anthracnose</td>
</tr>
<tr>
<td>Collectotrichum gloeosporioides var. minor)</td>
<td></td>
</tr>
<tr>
<td>Guignardia musae (anamorph Phyllosticta musarum)</td>
<td>freckle</td>
</tr>
<tr>
<td>Phytophthora palmivora</td>
<td>black rot</td>
</tr>
<tr>
<td>Ramichloridium musae</td>
<td>freckle</td>
</tr>
<tr>
<td>Aleurodics dispersus</td>
<td>spiralling whitefly</td>
</tr>
<tr>
<td>Amblypelta lutescens</td>
<td>fruit spotting bug</td>
</tr>
<tr>
<td>Amblypelta nitida</td>
<td>fruit spotting bug</td>
</tr>
<tr>
<td>Aonidella orientalis</td>
<td>oriental yellow scale</td>
</tr>
<tr>
<td>Araecerus coffeae</td>
<td>coffee bean weevil</td>
</tr>
<tr>
<td>Aspidiotus destructor</td>
<td>coconut scale</td>
</tr>
<tr>
<td>Atherigona orientalis</td>
<td>muscid fly</td>
</tr>
<tr>
<td>Bactrocera bryoniae</td>
<td>fruit fly #</td>
</tr>
</tbody>
</table>
Bactrocera musae  
#  
Bactrocera cucumis  
Bactrocera frauenfeldi  
Bactrocera jarvisi  
#  
Bactrocera neohumeralis  
Bactrocera tryoni  
Ceratitis capitata  
Chaetanaphothrips signipennis  
Chrysomphalus aonidum  
Chrysomphalus dictyospermi  
scale  

Bactrocera cucumis  
Bactrocera frauenfeldi  
Bactrocera jarvisi  
#  
Bactrocera neohumeralis  
Bactrocera tryoni  
Ceratitis capitata  
Chaetanaphothrips signipennis  
Chrysomphalus aonidum  
Chrysomphalus dictyospermi  
scale  

Cnaphalocrocis medinalis  
Dirioxa pornia  
Dysmicoccus brevipes  
Eliothrips brevisetis  
Eudocima fullonica  
Eudocima materna  
Ferrisia virgata  
Geloptera miracula  
Haplothrips gowdeyi  
Helicoverpa assulta  
Hemiberlesia palmae  
Icerya aegyptiaca  
Icerya seychellarum  
scale  

Isotenes miserana  
Leptoglossus gonagra  
Maconellicoccus hirsutus  
Melanitis leda ismene  
Monolepta australis  
Opogona glycypaga  
Orgyia australis  
Pentalonia nigronervosa  
Pinnaspis strachani  
Planococcus citri  
Planococcus minor  
Pseudaulacaspis cockerelli  
Rhyparida discopunctulata  
Spodoptera exigua  
Thrips florum  
Thrips hawaiensis  
Tiracola plagiata  
Tirathaba rufivena  
Unaspis citri  
Xenothictis sciaphila  
Brevipalpus lewisi  
Eutetranychus orientalis  
Tetranychus neocaledonicus  
banner fruit fly  
cucumber fruit fly  
fruit fly  
Jarvis’s fruit fly  
lesser Queensland fruit fly  
Queensland fruit fly  
Mediterranean fruit fly  
banner rust thrips  
Florida red scale  
dictyospernum  
rice leaf folder  
Island fruit fly  
pineapple mealybug  
banana rind thrips  
fruit-piercing moth  
fruit-sucking moth  
striped mealybug  
chrysomelid beetle  
black flower thrips  
cape gooseberry budworm  
citrus black scale  
Egyptian fluted scale  
Seychelles  
orange fruit borer  
squash bug  
pink hibiscus mealybug  
Rice butterfly  
red-shouldered leaf beetle  
sugar-cane bud moth  
vapourer moth  
banana aphid  
hibiscus snow scale  
citrus mealy bug  
passionvine mealybug  
Cockerell’s scale  
leaf beetle  
beet armyworm  
flower thrips  
banana flower thrips  
banner fruit caterpillar  
fruit borer  
citrus snow scale  
tortricid  
bunch mite  
pear leaf blister mite  
vegetable spider mite
## Non-regulated pests (non actionable)

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Erwinia carotovora</em></td>
<td>bacterial soft rot</td>
</tr>
<tr>
<td><em>Aspergillus flavus</em></td>
<td>aspergillus storage rot</td>
</tr>
<tr>
<td><em>Aspergillus niger</em></td>
<td>aspergillus rot</td>
</tr>
<tr>
<td><em>Ceratocystis paradoxa</em> (anamorph <em>Thielaviopsis paradoxa</em>)</td>
<td>ceratocystis rot</td>
</tr>
<tr>
<td><em>Colletotrichum musae</em></td>
<td>anthracnose</td>
</tr>
<tr>
<td><em>Deightoniella torulosa</em></td>
<td>black tip</td>
</tr>
<tr>
<td><em>Fusarium pallidoroseum</em></td>
<td>fusarium rot</td>
</tr>
<tr>
<td><em>Glomerella cingulata</em> (anamorph <em>Colletotrichum gloeosporioides</em>)</td>
<td>anthracnose</td>
</tr>
<tr>
<td><em>Lasiodiplodia theobromae</em></td>
<td></td>
</tr>
<tr>
<td><em>Magnaportha grisea</em> (anamorph <em>Pyricularia grisea</em>)</td>
<td>fruit and stem-end rot</td>
</tr>
<tr>
<td><em>Sclerotinia sclerotiorum</em></td>
<td>cottony rot</td>
</tr>
<tr>
<td><em>Agrotis ipsilon</em></td>
<td>greasy cutworm</td>
</tr>
<tr>
<td><em>Aonidiella aurantii</em></td>
<td>California red scale</td>
</tr>
<tr>
<td><em>Aphis gossypii</em></td>
<td>cotton aphid</td>
</tr>
<tr>
<td><em>Araecerus fasciculatus</em></td>
<td>coffee bean weevil</td>
</tr>
<tr>
<td><em>Aspidiotus nerii</em></td>
<td>oleander scale</td>
</tr>
<tr>
<td><em>Chrysodeixis eriosoma</em></td>
<td>green garden looper</td>
</tr>
<tr>
<td><em>Coccus hesperidum</em></td>
<td>brown soft scale</td>
</tr>
<tr>
<td><em>Hemiberlesia cyanophylli</em></td>
<td>cyanophyllum scale</td>
</tr>
<tr>
<td><em>Hemiberlesia lataniae</em></td>
<td>latania scale</td>
</tr>
<tr>
<td><em>Hemiberlesia rapax</em></td>
<td>greedy scale</td>
</tr>
<tr>
<td><em>Hercinothrips bicinctus</em></td>
<td>banana silvering thrips</td>
</tr>
<tr>
<td><em>Hermetia illucens</em></td>
<td>black soldier fly</td>
</tr>
<tr>
<td><em>Listrodolides difficilis</em></td>
<td>vegetable weevil</td>
</tr>
<tr>
<td><em>Pseudococcus longispinus</em></td>
<td>longtail mealybug</td>
</tr>
<tr>
<td><em>Rhopalosiphum maidis</em></td>
<td>corn leaf aphid</td>
</tr>
<tr>
<td><em>Spodoptera litura</em></td>
<td>cluster caterpillar</td>
</tr>
<tr>
<td><em>Brevipalpus californicus</em></td>
<td>bunch mite</td>
</tr>
<tr>
<td><em>Polyphagotarsonemus latus</em></td>
<td>broad mite</td>
</tr>
<tr>
<td><em>Tetranychus lambi</em></td>
<td>strawberry spider mite</td>
</tr>
<tr>
<td><em>Tetranychus urticae</em></td>
<td>twospotted spider mite</td>
</tr>
</tbody>
</table>

# Denotes high impact pest
Capsicums can be exported to New Zealand under the following appendices:

- Appendix 2 (fruit fly area freedom) to the NZ BQA/IHS
- Appendix 3 (fumigation) and Appendix 10 (field control programs) NZ BQA/IHS
- Appendix 12 (irradiation) to the NZ BQA/IHS

A number of Risk group 2 pests are listed for capsicums, and the Department of Agriculture can certify freedom from these pests based on the following:

**Bactrocera bryoniae**

1. Non-host status of capsicums. It is suggested that the recorded association of this pest with this commodity is an error.
2. Normal spray programs using fenthion or dimethoate to control fruit fly (both registered for this purpose) will control *B. bryoniae* should it occur.
3. Pre-export inspection of fruit will identify the presence of *B. bryoniae*, and the fruit would be rejected for export to New Zealand.
4. Historical records show that *B. bryoniae* has never been detected on capsicum fruit during Department of Agriculture pre-export inspection.
5. Irradiation at 150 Gy is determined to be effective for all fruit flies.

**Bactrocera musae**

1. Mandatory spray programs using fenthion or dimethoate to control fruit fly (both registered for this purpose) will control *B. musae* should it occur.
2. Pre-export inspection of fruit will identify the presence of *B. musae*, and the fruit would be rejected for export to New Zealand.
3. Historical records show that *B. musae* has never been detected on capsicum fruit during Department of Agriculture pre-export inspection.
4. Irradiation at 150 Gy is determined to be effective for all fruit flies.

**Bemisia tabaci**

1. Non-preferred host status of capsicums, with infestations being very low to nil.
2. The lifecycle of *B. tabaci* is carried out on the underside of host plant leaves, and there is no association of this pest with the fruit.
3. If a situation arose where *B. tabaci* was found to be damaging crops, application of chemicals (registered for use against *B. tabaci*) such as D-C Tron would provide the necessary control of this pest.
4. Pre-export inspection of fruit will identify the presence of *B. tabaci*, and the fruit would be rejected for export to New Zealand.
5. Historical records show that *B. tabaci* has never been detected on capsicum fruit during Department of Agriculture pre-export inspection.

**Conogethes punctiferalis** (yellow peach moth)

1. Irradiation at 289 Gy is determined to be effective for *C. punctiferalis*.
2. Irradiation at 150 Gy is permitted where effective in-field controls have been undertaken for *C. punctiferalis*. Methyl bromide at appropriate rates (prior to export) is also an effective treatment for Lepidopteran spp.

**Thrips palmi** [vect]
1. Pre-export inspection of fruit will identify the presence of *Thrips palmi* and the fruit would be rejected for export to New Zealand, or treated with methyl bromide.

2. Historical records show that *Thrips palmi* has never been detected on capsicum fruit during Department of Agriculture pre-export inspection.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

## Regulated pests (actionable)

### Quarantine: Risk group 3 pests (actionable) - Mandatory Treatments

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
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</tr>
<tr>
<td><strong>Diptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Tephritidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bactrocera aquilonis</em></td>
<td>Northern Territory fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera bryoniae</em></td>
<td>fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera cucumis</em></td>
<td>cucumber fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera frauenfeldi</em></td>
<td>fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera kraussi</em></td>
<td>fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera jarvisi</em></td>
<td>Jarvis’s fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera musae</em></td>
<td>Banana fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera neohumeralis</em></td>
<td>lesser Queensland fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera tryoni</em></td>
<td>Queensland fruit fly</td>
</tr>
<tr>
<td><em>Ceratitis capitata</em></td>
<td>Mediterranean fruit fly</td>
</tr>
</tbody>
</table>

### Quarantine: Risk group 2 pests (actionable) - Management Control Systems

<table>
<thead>
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<th>Pest Scientific Name</th>
<th>Common Name</th>
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</thead>
<tbody>
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<td><strong>Insect</strong></td>
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<tr>
<td><strong>Insecta</strong></td>
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<tr>
<td><strong>Diptera</strong></td>
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</tr>
<tr>
<td><strong>Tephritidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bactrocera bryoniae</em></td>
<td>fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera musae</em></td>
<td>banana fruit fly</td>
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<tr>
<td><strong>Homoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Aleyrodidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bemisia tabaci</em> [vect.]</td>
<td></td>
</tr>
<tr>
<td><strong>Lepidoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pyralidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Conogethes punctiferalis</em></td>
<td>yellow peach moth</td>
</tr>
<tr>
<td><strong>Thysanoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Thripidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Thrips palmi</em> [vect.]</td>
<td>melon thrips</td>
</tr>
</tbody>
</table>

### Quarantine: Risk group 1 pests (actionable) - Nil permitted in ≤ 600 unit sample.
Treatments (where applicable) allowed as corrective action.

Insect

**Insecta**

*Tenebrionidae*

*Gonocephalum carpentariae* |
false wireworm

**Diptera**

*Muscidae*

*Atherigona orientalis* |
muscid fly

*Tephritidae*

*Dirioxa pornia* |
island fruit fly

**Hemiptera**

*Aleyrodidae*

*Trialeurodes vaporariorum* |
greenhouse whitefly

*Cicadellidae*

*Orosius argenentatus [vect.]* |
common brown leafhopper

*Orosius orientalis [vect.]* |
common brown leafhopper

**Lygaecidae**

*Nysius vinitor* |
Rutherglen bug

**Pentatomidae**

*Plautia affinis* |
green stink bug

**Pyrrhocoridae**

*Dindymus versicolor* |
harlequin bug

**Rhopalidae**

*Leptocoris mitellatus* |
leptocoris bug

**Homoptera**

*Aleyrodidae*

*Aleurodicus disperses* |
spiralling whitefly

*Trialeurodes vaporariorum [strain]* |
greenhouse whitefly

**Cicadellidae**

*Austroasca viridigrisea* |
vegetable leafhopper

**Coccidae**

*Chloropulvinaria psidii* |
guava scale

*Pulvinaria urbicola* |
cottony maple scale

**Diaspididae**

*Pseudaulacaspis pentagona* |
white peach scale

*Unaspis citri* |
citrus snow scale

**Margarodidae**

*Icerya seychellarum* |
Seychelles scale

**Pseudococcidae**

*Dysmicoccus brevipes* |
pineapple mealybug

*Planococcus minor* |
Pacific mealybug

**Lepidoptera**

**Noctuidae**

*Helicoverpa assulta* |
cape gooseberry budworm

*Helicoverpa punctigera* |
oriental tobacco budworm

*Spodoptera littoralis* |
cotton leafworm

**Pyralidae**

*Cryptoblabes gnidiella* |
Christmas berry webworm

**Thysanoptera**

**Thripidae**
*Frankliniella schultzei* [vect.]  
*tomato thrips*

*Scirtothrips dorsalis* [vect.]  
*chilli thrips*

**Mite**

**Arachnida**  
**Acarina**  
**Tetranychidae**  
*Eutetranychus orientalis*  
*pear leaf blister mite*

**Fungus**

**Ascomycota**  
**Hypocreales**  
**Hypocreaceae**  
*Nectria haematococca var. brevicona*  
*dry rot*

**Mitosporic Fungi (Hyphomycetes)**  
**Hyphomycetales**  
**Dematiaceae**  
*Alternaria alternata* f. sp. *lycopersici*  
*Cercospora capsici*  
*Cercospora capsici*  
*clercospora spot*

**Cladosporium sp.**  
*cladosporium mould*

**Stemphylium solani**  
*stemphylium spot*

**Tuberculariales**  
**Tuberculariaceae**  
*Fusarium oxysporum* f. sp. *vasinfectum*  
*fusarium wilt*

**Pythiales**  
**Pythiaceae**  
*Phytophthora capsici*  
*buckeye rot*

*Pythium aphanidermatum*  
*cottony leak*

**Virus**

capsicum chlorosis virus (CaCV)  
potato spindle tuber viroid (PSTVd)  
tobacco leaf curl bigeminivirus [VO]  
tomato torrado virus (ToTV)  
tomato yellow leaf curl virus (TYLCV)  

**Phytoplasmas**

Tomato big bud phytoplasma (TBB)

**Weed**

**Angiospermae**  
**Asterales**  
**Asteraceae**  
*Baccharis halimifolia*  
*baccharis*

*Chondrilla juncea*  
*skeleton weed*

*Crassocephalum crepidoïdes*  
*redflower ragleaf*
### Xanthium spp. (except X. spinosum)
- **Common Name:** bur

### Geraniales

#### Caryophyllales

- **Amaranthaceae**
  - **Amaranthus spp.**
    - **Common Name:** amaranthus

- **Zygophyllaceae**
  - **Tribulus spp.**
    - **Common Name:** caltrop

### Poales

- **Poaceae**
  - **Cenchrus spp. (except C. ciliaris)**
  - **Eragrostis curvula**
  - **Eragrostis poaeoides**
  - **Pennisetum alopecuroides**
  - **Pennisetum polystachion**
  - **Phragmites spp.**
  - **Sorghum halepense**
  - **Sorghum x alnum**
    - **Common Name:**
      - Grass
      - African love grass
      - Mission grass
      - Chinese pennisetum
      - Johnson grass
      - Columbus grass

### Solanales

- **Solanaceae**
  - **Lycium spp.**
    - **Common Name:**
      - Boxthorn
      - Silverleaf nightshade

### Regulated non-quarantine pests

- None

### Regulated non plant pests

- None

### Non-regulated pests (non-actionable)

### Non-regulated non-quarantine pests

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
<td></td>
</tr>
<tr>
<td><strong>Coleoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coccinellidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Epilachna vigintioctopunctata</em></td>
<td>28-spot ladybird</td>
</tr>
<tr>
<td><strong>Curculionidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Listroderes costirostris</em></td>
<td>vegetable weevil</td>
</tr>
<tr>
<td><em>Listroderes difficilis</em></td>
<td>vegetable weevil</td>
</tr>
<tr>
<td><em>Listroderes obliquus</em></td>
<td>vegetable weevil</td>
</tr>
<tr>
<td><strong>Hemiptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pentatomidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Nezara viridula</em></td>
<td>green vegetable bug</td>
</tr>
<tr>
<td><strong>Homoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Aleyrodidae</strong></td>
<td></td>
</tr>
</tbody>
</table>
Bemisia argentifolii  poinsettia whitefly

Aphididae
Aphis craccivora  cowpea aphid
Aphis gossypii  cotton aphid
Myzus persicae  green peach aphid

Coccidae
Saissetia coffeae  hemispherical scale

Pseudococcidae
Pseudococcus longispinus  longtailed mealybug

Lepidoptera
Noctuidae
Agrotis ipsilon  greasy cutworm
Chrysodeixis eriosoma  green garden looper
Helicoverpa armigera  tomato fruitworm
Spodoptera litura  cluster caterpillar

Gelechiidae
Phthorimaea operculella  potato tuber moth

Pyralidae
Sceliodes cordalis  poroporo fruit borer

Orthoptera
Gryllidae
Teleogryllus commodus  black field cricket

Thysanoptera
Thripidae
Frankliniella occidentalis  western flower thrips
Thrips tabaci  onion thrips

Mite

Arachnida
Acarina
Eriophyidae
Aculeps lycopersici  tomato russet mite

Tarsonemidae
Polyphagotarsonemus latus  broad mite

Tetranychidae
Tetranychus ludeni  bean spider mite
Tetranychus urticae  twospotted spider mite

Fungus

Ascomycota
Diaporthales
Valsaceae
Diaporthe phaseolorum (anamorph Phomopsis phaseoli)  phomopsis stem rot

Dothideales
Mycosphaerellaceae
Mycosphaerella tassiana (anamorph Cladosporium herbarum)  black leaf spot

Erysiphales
Erysiphaceae
Erysiphe cichoracearum  
(ananomorph Oidium asteris-punicei)  powdery mildew

**Hypocreales**

**Hypocreaceae**

Gibberella fujikuroi  
(ananomorph Fusarium fujikuroi)  fusarium rot

Gibberella intricans  
(ananomorph Fusarium equisetii)  root and stem dry rot

Nectria haematococca  
(ananomorph Fusarium solani)  fusarium fruit rot

**Leotiales**

**Sclerotiniaceae**

Botryotinia fuckeliana  
(ananomorph Botrytis cinerea)  grey mould

Sclerotinia minor

Sclerotinia sclerotiorum  cottony rot

**Mitosporic Fungi (Coelomycetes)**

**Unknown Coelomycetes**

**Unknown Coelomycetes**

Colletotrichum truncatum  anthracnose

**Phyllachorales**

**Phyllachoraceae**

Glomerella cingulata  
(ananomorph Colletotrichum gloeosporioides)  bitter rot

**Basidiomycota: Basidiomycetes**

**Ceratobasidiales**

**Ceratobasidiaceae**

Thanatephorus cucumeris  
(ananomorph Rhizoctonia solani)  rhizoctonia rot

**Stereales**

**Atheliaceae**

Athelia rolfsii  (ananomorph Sclerotium rolfsii)  Rolf's disease

**Mitosporic Fungi (Coelomycetes)**

**Sphaeropsidales**

**Sphaerioidaceae**

Lasiodiplodia theobromae  fruit and stem-end rot

Macrospomina phaseolina  ashy stem blight

Phoma destructiva  bulb rot

**Unknown Coelomycetes**

**Unknown Coelomycetes**

Colletotrichum acutatum  anthracnose

Colletotrichum capsici  anthracnose

Colletotrichum circinans  smudge

Colletotrichum coccodes  anthracnose

Colletotrichum dematium  anthracnose

**Mitosporic Fungi (Hyphomycetes)**

**Hyphomycetales**

**Dematiaceae**

Alternaria alternata  black stalk rot

Alternaria longipes  alternaria spot

Alternaria solani  leaf spot

**Moniliaceae**
Verticillium dahliae  verticillium wilt

**Tuberculariales**  
**Tuberculariaceae**  
*Fusarium oxysporum*  leaf spot

**Oomycota**  
**Pythiales**  
**Pythiaceae**  
*Phytophthora nicotianae var. parasitica*  collar and root rot  
*Pythium irregulare*  pythium root and stem rot

**Peronosporales**  
**Peronosporaceae**  
*Peronospora tabacina*  downy mildew

**Bacterium**

**Corynebacteriaceae**  
*Clavibacter michiganensis*  
subsp. *michiganensis*  bacterial canker

**Enterobacteriaceae**  
*Erwinia carotovora*  bacterial soft rot  
*Erwinia carotovora subsp. carotovora*  bacterial soft rot

**Pseudomonadaceae**  
*Pseudomonas cichorii*  bacterial leaf spot  
*Pseudomonas marginalis*  bacterial spot  
*Pseudomonas syringae pv. syringae*  bacterial soft rot  
*Pseudomonas syringae pv. tomato*  bacterial speck  
*Pseudomonas viridiflava*  leaf blight  
*Ralstonia solanacearum*  bacterial wilt  
*Xanthomonas vesicatoria*  bacterial spot

**Rhizobiaceae**  
*Agrobacterium tumefaciens*  crown gall

**Virus**  
Tobacco ringspot nepovirus (TRSV)  
Tomato spotted wilt virus (TSWV)

**Weed**

**Angiospermae**  
**Asterales**  
**Asteraceae**  
*Galinsoga parviflora*  sowthistle

**Poales**  
**Poaceae**  
*Echinochloa spp.*  grasses  
*Eleusine indica*  goose grass  
*Pennisetum macrourum*  African feather grass

**Non-regulated non plant pests**
None
CITRUS
Citrus sinensis (orange), C. reticulata (mandarin/tangerine), C. paradisi (grapefruit), C. limon (lemon), C. reticulata x C. paradisi (tangelo) and C. aurantiifolia (lime)

Citrus can be exported to New Zealand under appendices 2 (fruit fly area freedom) and 5 (cold storage disinfestation) to the NZ BQA/IHS.

The pest citrus leaf miner, whilst listed as a Risk group 2 pest, does not need any specific grower/orchard recorded controls as New Zealand have accepted that this pest is not a pest of the mature fruit.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by Department of Agriculture/MPI.

Regulated pests (actionable)

Quarantine: Risk group 3 pests (actionable) – Mandatory Treatments

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<thead>
<tr>
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<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insecta</td>
<td></td>
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</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Tephritidae</td>
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</tr>
<tr>
<td>Bactrocera aquilonis</td>
<td>fruit fly</td>
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<tr>
<td>Bactrocera halfordiae</td>
<td>fruit fly</td>
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<td>Ceratitis capitata</td>
<td>Mediterranean fruit fly</td>
</tr>
</tbody>
</table>

Quarantine: Risk group 2 pests (actionable) – Management Control Systems

Insect

Insecta
Lepidoptera
Gracillariidae
Phyllocnistas citrella citrus leafminer

Fungus

Ascomycota
Dothideales
Botryosphaeriaceae
Guignardia citricarpa
Quarantine: Risk group 1 pests (actionable) – Nil permitted in ≤ 600 unit sample. Treatments (where applicable) allowed as corrective action.

Insect

Insecta

Coleoptera

Bostrichidae

Bostrychopsis jesuita

Buprestidae

Melobasis purperescens

Cerambycidae

Dihammus vastator

Paradisterna plumifera

Platymopsis pulvulens

Skeletodes tetrops

Stenocentrus ostricilla

Strongylurus thoracicus

Urananthus cryptophagus

Chrysomelidae

Aulacophora hilaris

Geloptera miracula

Geloptera porosa

Monolepta australis

Rhyparidae spp.

Curculionidae

Crossotarsus subpellucidus

Eutinophaea bicristata

Leptopius squalidus

Mylllocerus multimaculata

Neomerinmetes sobrinus

Orthorhinus cylindrirostris

Otiorhynchus cribicollis

Peripagis limbatus

Perperus augstibasis

Perperus lateralis

Pseudomydaus citriperda

Sternocorynus neglectus

Nitidulidae

Carpophilus maculatus

Scarabaeidae

Glycphana stolata

Protaetia fusca

Diptera

Muscidae

Atherigona orientalis

Tephritidae

Dirioxa pornia

Hemiptera

Coreidae

(anamorph Phyllosticta citricarpa)
**Amblypelta brevicornis**  fruit-spotting bug

**Fabricilis australis**  squash bug

**Mictis profana**  crusader bug

**Lygaeidae**

**Nysius vinitor**  Rutherglen bug

**Pentatomidae**

**Biprorulus bibax**  spined citrus bug

**Musgraveia sulciventris**  bronze orange bug

**Unknown Hemiptera**

**Austropeplus sp.**  citrus blossom bug

**Tropidochilus sordida**  lace bug

**Homoptera**

**Aleyrodidae**

**Asterobemisia helyi**  whitefly

**Orchamoplatus citri**  Australian citrus whitefly

**Coccidae**

**Ceroplastes rubens**  red wax scale

**Coccus pseudomagnoliarum**  citricola scale

**Coccus viridis**  green scale

**Pulvinaria cellulosae**  pulvinaria scale

**Diaspidae**

**Aonidiella citrina**  yellow scale

**Aonidiella orientalis**  oriental yellow scale

**Chrysomphalus aonidum**  Florida red scale

**Chrysomphalus dictyospermi**  dictyospernum scale

**Lepidosaphes beckii**  purple scale

**Lepidosaphes gloverii**  Glover scale

**Lepidosaphes pallida**  mussel scale

**Pseudoaonidia trilobiformis**  trilobite scale

**Unaspis citri**  citrus snow scale

**Flatidae**

**Colgaroides acuminata**  mango planthopper

**Siphanta hebes**  moth bug

**Pseudococcidae**

**Ferrisia virgata**  striped mealybug

**Maconellicoccus hirsutus**  hibiscus mealybug

**Nipaecoccus viridis**  hibiscus mealybug

**Planococcus pacificus**  citrus mealybug

**Hymenoptera**

**Eurytomidae**

**Bruchophagus fellis**  citrus gall midge

**Formicidae**

**Camponotus spp.**  carpenter ants

**Myrmecia spp.**  bulldog ants

**Lepidoptera**

**Cosmopterigidae**

**Cosmopyx schismatias**  leafminer

**Geometridae**

**Lophodes sinistraria**  brown looper

**Noctuidae**

**Eudocima fullonia**  fruit-piercing moth

**Eudocima materna**  fruit-sucking moth
<table>
<thead>
<tr>
<th>Insecta Family</th>
<th>Species</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eudocima</td>
<td>salaminia</td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td>Eudocima</td>
<td>tyrannus</td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td>Ischja</td>
<td>albata</td>
<td>noctuid moth</td>
</tr>
<tr>
<td>Lagoptera</td>
<td>regia</td>
<td>noctuid moth</td>
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<tr>
<td>Mocis</td>
<td>frugalis</td>
<td>semi-looper caterpillar</td>
</tr>
<tr>
<td>Othreis</td>
<td>tyrannus</td>
<td>fruit-sucking moth</td>
</tr>
<tr>
<td>Parallelia</td>
<td>palumba</td>
<td>noctuid moth</td>
</tr>
<tr>
<td>Tiracola</td>
<td>plagiata</td>
<td>banana fruit caterpillar</td>
</tr>
<tr>
<td>Papilionidae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Papilio</td>
<td>aegeus</td>
<td>large citrus butterfly</td>
</tr>
<tr>
<td>Papilio</td>
<td>anactus</td>
<td>small citrus butterfly</td>
</tr>
<tr>
<td>Psychidae</td>
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</tr>
<tr>
<td>Hyalaria</td>
<td>huebneri</td>
<td>leaf case moth</td>
</tr>
<tr>
<td>Oiketicus</td>
<td>elongatus</td>
<td>Saunders’s case moth</td>
</tr>
<tr>
<td>Pyralidae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conogethes</td>
<td>punctiferalis</td>
<td>yellow peach moth</td>
</tr>
<tr>
<td>Cryptoblabes</td>
<td>adoceta</td>
<td>false blossom moth</td>
</tr>
<tr>
<td>Cryptoblabes</td>
<td>hemigypsa</td>
<td>false blossom moth</td>
</tr>
<tr>
<td>Tortricidae</td>
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</tr>
<tr>
<td>Adoxophyes</td>
<td>templana</td>
<td>leafroller</td>
</tr>
<tr>
<td>Epiphyas</td>
<td>spp. (except E. postvittana)</td>
<td>leafrollers</td>
</tr>
<tr>
<td>Isotenes</td>
<td>miserana</td>
<td>orange fruitborer</td>
</tr>
<tr>
<td>Yponomeutidae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prays</td>
<td>parilis</td>
<td>citrus flower moth</td>
</tr>
<tr>
<td>Thysanoptera</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phlaeothripidae</td>
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<td></td>
</tr>
<tr>
<td>Haplothrips</td>
<td>gowdeyi</td>
<td>black flower thrips</td>
</tr>
<tr>
<td>Haplothrips</td>
<td>victoriensis</td>
<td>tubular black thrips</td>
</tr>
<tr>
<td>Thripidae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chaetanaphothrips</td>
<td>orchidii</td>
<td>banana rust thrips</td>
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<td>Megalurothrips</td>
<td>kellyanus</td>
<td>thrips</td>
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<td>Scirtothrips</td>
<td>albomaculatus</td>
<td>thrips</td>
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<td>Scirtothrips</td>
<td>signipennis</td>
<td>thrips</td>
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<tr>
<td>Unknown Insecta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unknown Insecta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comana</td>
<td>humeralis</td>
<td>slug caterpillar</td>
</tr>
</tbody>
</table>

**Mite**

<table>
<thead>
<tr>
<th>Arachnida</th>
<th>Acarina</th>
<th>Eriophyidae</th>
<th>Tegolophus australis</th>
<th>brown citrus mite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eriophyidae</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Tenuipalpidae</td>
<td></td>
<td></td>
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<tr>
<td>Brevipalpus</td>
<td>lewisi</td>
<td>bunch mite</td>
<td></td>
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<tr>
<td>Brevipalpus</td>
<td>obovatus</td>
<td>privet mite</td>
<td></td>
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<tr>
<td>Tetranychidae</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Eutetranychus</td>
<td>banksi</td>
<td>Texas citrus mite</td>
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<td></td>
</tr>
<tr>
<td>Eutetranychus</td>
<td>orientalis</td>
<td>pear leaf blister mite</td>
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<tr>
<td>Tetranychus</td>
<td>neocaledonicus</td>
<td>Mexican spider mite</td>
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</tbody>
</table>
Regulated non-quarantine pests

None

Regulated non plant pests/unwanted organisms

None

Non-regulated pests (non-actionable)

Non-regulated non-quarantine pests

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coleoptera</strong></td>
<td></td>
</tr>
<tr>
<td>Curculionidae</td>
<td></td>
</tr>
<tr>
<td>Asynonychus cervinus</td>
<td>Fuller’s rose weevil</td>
</tr>
<tr>
<td>Maleuterpes spinipes</td>
<td>dicky rice weevil</td>
</tr>
<tr>
<td>Nitidulidae</td>
<td></td>
</tr>
<tr>
<td>Carpophilus hemipterus</td>
<td>dried fruit beetle</td>
</tr>
<tr>
<td><strong>Hemiptera</strong></td>
<td></td>
</tr>
<tr>
<td>Pentatomidae</td>
<td></td>
</tr>
<tr>
<td>Nezara viridula</td>
<td>green vegetable bug</td>
</tr>
<tr>
<td><strong>Homoptera</strong></td>
<td></td>
</tr>
<tr>
<td>Coccidae</td>
<td></td>
</tr>
<tr>
<td>Ceroplastes destructor</td>
<td>white wax scale</td>
</tr>
<tr>
<td>Ceroplastes sinensis</td>
<td>Chinese wax scale</td>
</tr>
<tr>
<td>Coccus hesperidum</td>
<td>brown soft scale</td>
</tr>
<tr>
<td>Coccus longulus</td>
<td>long brown scale</td>
</tr>
<tr>
<td>Saissetia coffeae</td>
<td>hemispherical scale</td>
</tr>
<tr>
<td>Saissetia oleae</td>
<td>black scale</td>
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<tr>
<td>Diaspididae</td>
<td></td>
</tr>
<tr>
<td>Aonidiella aurantii</td>
<td>California red scale</td>
</tr>
<tr>
<td>Aspidiotus nerii</td>
<td>oleander scale</td>
</tr>
<tr>
<td>Parlatoria pergandii</td>
<td>chaff scale</td>
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<tr>
<td>Margarodidae</td>
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<tr>
<td>Icerya purchasi</td>
<td>cottony cushion scale</td>
</tr>
<tr>
<td><strong>Pseudococcidae</strong></td>
<td></td>
</tr>
<tr>
<td>Planococcus citri</td>
<td>citrus mealybug</td>
</tr>
<tr>
<td>Pseudococcus calceolariae</td>
<td>citrophilus mealybug</td>
</tr>
<tr>
<td>Pseudococcus longispinus</td>
<td>longtailed mealybug</td>
</tr>
<tr>
<td>Ricianidae</td>
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<tr>
<td>Scolypopa australis</td>
<td>passionvine hopper</td>
</tr>
<tr>
<td><strong>Lepidoptera</strong></td>
<td></td>
</tr>
<tr>
<td>Noctuidae</td>
<td></td>
</tr>
<tr>
<td>Helicoverpa armigera</td>
<td>tomato fruitworm</td>
</tr>
<tr>
<td>Spodoptera litura</td>
<td>cluster caterpillar</td>
</tr>
</tbody>
</table>
Sphingidae
Agrius convolvuli sweet potato hornworm

Tortricidae
Merophyas divulsana lucerne leafroller
Epiphyas postvittana light brown apple moth

Thysanoptera
Thripidae
Heliothrips haemorrhoidalis greenhouse thrips
Pseudanaphthrips achaetus thrips
Thrips australis thrips
Thrips imaginis plague thrips
Thrips tabaci onion thrips

Mite

Arachnida
Acarina
Eriophyidae
Aceria sheldoni citrus bud mite
Phyllocoptura oleivora citrus rust mite
Tarsonemidae
Polyphagotarsonemus latus broad mite
Tenuipalpidae
Brevipalpus californicus bunch mite
Brevipalpus phoenicis passionvine mite
Tetranychidae
Panonychus citri citrus red mite
Tetranychus urticae twospotted spider mite

Non-regulated non-plant pests/organisms

None
CUCUMBER
Cucumis sativus

Cucumbers can be exported to New Zealand under the following appendices:

- Appendix 2 (fruit fly area freedom),
- Appendix 11 (winter window) and Appendix 10 (field control program).

Note: Appendix 10 and Appendix 11 are only acceptable between 1 May and 1 September.

A number of Risk group 2 pests have been listed for cucumbers. The Department of Agriculture can certify freedom from these pests based on the following:

**Bemisia tabaci**

1. The lifecycle of *B. tabaci* is carried out on the underside of host plant leaves, and there is no association of this pest with the fruit.
2. If a situation arose where *B. tabaci* was found to be damaging crops, application of chemicals (registered for use against *B. tabaci*) such as D-C Tron would provide the necessary control of this pest.
3. Pre-export inspection of fruit will identify the presence of *B. tabaci*, and the fruit would be rejected for export to New Zealand.
4. Historical records show that *B. tabaci* has never been detected on cucumber fruit during Department of Agriculture pre-export inspection.

Note: item 3 above does not apply to cucumber fruit exported to New Zealand under appendix 2 (fruit fly area freedom) or 11 (winter window treatment) to the NZ BQA. It is felt however, that items 1, 2 and 4 provide an appropriate level of confidence in certifying freedom from this pest.

**Thrips palmi**

1. Pre-export inspections of fruit will identify the presence of *T. palmi*, and the fruit would be rejected for export to New Zealand.
2. Historical records show that *T. palmi* has never been detected on cucumber fruit during Department of Agriculture pre-export inspection.

Note: item 1 above does not apply to cucumber fruit exported to New Zealand under appendix 2 (fruit fly area freedom) or 11 (winter window treatment) to the NZ BQA. It is felt however, that item 2 provides an appropriate level of confidence in certifying freedom from this pest.

**Tetranychus kanzawai**

1. Dimethoate is registered for in-field use against *Tetranychus* spp. Cucumbers exported to New Zealand under appendices 4 and 10 to the NZ BQA are required to undergo an in-field spray program for the control of fruit fly. This program is also effective against *Tetranychus* spp.
2. Pre-export inspection of fruit would identify the presence of *T. kanzawai*, and the fruit would be rejected for export to New Zealand.
3. Historical records show that *T. kanzawai* has never been detected on cucumber fruit during Department of Agriculture pre-export inspection.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.
Regulated pests (actionable)

Quarantine: Risk group 3 pests (actionable) - Mandatory Treatments

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
<td></td>
</tr>
<tr>
<td>Insecta</td>
<td></td>
</tr>
<tr>
<td>Diptera</td>
<td></td>
</tr>
<tr>
<td>Tephritidae</td>
<td></td>
</tr>
<tr>
<td>Bactrocera cucumis</td>
<td>cucumber fruit fly</td>
</tr>
<tr>
<td>Ceratitis capitata</td>
<td>Mediterranean fruit fly</td>
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</table>

Quarantine: Risk group 2 pests (actionable) - Management Control Systems

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
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</tr>
<tr>
<td>Insecta</td>
<td></td>
</tr>
<tr>
<td>Homoptera</td>
<td></td>
</tr>
<tr>
<td>Aleyrodidae</td>
<td></td>
</tr>
<tr>
<td>Bemisia tabaci</td>
<td>sweet potato whitefly</td>
</tr>
<tr>
<td>Thysanoptera</td>
<td></td>
</tr>
<tr>
<td>Thripidae</td>
<td></td>
</tr>
<tr>
<td>Thrips palmi [vect.]</td>
<td>melon thrips</td>
</tr>
</tbody>
</table>

Mite

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arachnida</td>
<td></td>
</tr>
<tr>
<td>Acarina</td>
<td></td>
</tr>
<tr>
<td>Tetranychida</td>
<td></td>
</tr>
<tr>
<td>Tetranychus kanzawai</td>
<td>kanzawa mite</td>
</tr>
</tbody>
</table>

Quarantine: Risk group 1 pests (actionable) - Nil permitted in ≤ 600 unit sample. Treatments (where applicable) allowed as corrective action.

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
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</tr>
<tr>
<td>Insecta</td>
<td></td>
</tr>
<tr>
<td>Coleoptera</td>
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<tr>
<td>Cerambycidae</td>
<td></td>
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<tr>
<td>Apomecyna histrio</td>
<td>cucurbit stemborer</td>
</tr>
<tr>
<td>Chrysomelidae</td>
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</tr>
<tr>
<td>Aulacophora foveicollis</td>
<td>red pumpkin beetle</td>
</tr>
<tr>
<td>Aulacophora hilaris</td>
<td>pumpkin beetle</td>
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<tr>
<td>Monolepta australis</td>
<td>red-shouldered leaf beetle</td>
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<tr>
<td>Coccinellidae</td>
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<tr>
<td>Epilachna boisduvali</td>
<td>epilachna beetle</td>
</tr>
<tr>
<td>Epilachna vigintiactomaculata</td>
<td>leaf feeding coccinellid</td>
</tr>
<tr>
<td>Henosepilachna cucurbitae</td>
<td>cucurbit ladybird</td>
</tr>
<tr>
<td>Henosepilachna suffusa</td>
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</tr>
</tbody>
</table>
Curculionidae
Diptera
  Sciaridae
    Bradysia impatiens         fungus gnat
  Tephritidae
    Dacus axanus        fruit fly
    Dacus petioliforma    fruit fly
Hemiptera
  Coreidae
    Amblypelta nitida       fruit-spotting bug
    Fabricictilis australis squash bug
  Dinidoridae
    Megynumen insulare     cucurbit shield bug
  Lygaeidae
    Nysius vinitor         Rutherglen bug
  Miridae
    Creontiades dilutus     green mirid
    Hallicidiius tibialis   plant bug
Homoptera
  Aphididae
    Myzus persicae [vect.]  green peach aphid
  Cicadellidae
    Empoasca spp.          green leafhoppers
  Diaspididae
    Lepidosaphes beckii     purple scale
  Pseudococcidae
    Dysmicoccus brevipes    pineapple mealybug
    Ferrisia virgata       striped mealybug
    Planococcus minor       Pacific mealybug
Lepidoptera
  Noctuidae
    Anadevidia peponis      cucumber looper
    Helicoverpa assulta     cape gooseberry budworm
    Spodoptera exigua       beet armyworm
  Pyralidae
    Diaphania indica       melon moth
    Hellula undalis        oriental cabbage webworm
Orthoptera
  Acrididae
    Phaulacridium vittatum  wingless grasshopper
Thysanoptera
  Thripidae
    Thrips hawaiiensis     Hawaiian flower thrips

Mite

Arachnida
  Acarina
    Acaridae
      Tyrophagus dimidiatus  mushroom mite
    Tetranychidae
      Eutetranychus orientalis  pear leaf blister mite
*Tetranychus desertorum* desert spider mite
*Tetranychus lombardinii* southern lobed mite
*Tetranychus neocaledonicus* Mexican spider mite

**Fungus**

**Ascomycota**
- **Unknown Ascomycota**
  - **Hyponectriaceae**
    - *Monographella cucumerina* (anamorph *Microdochium tabacinum*)

**Mitosporic Fungi (Hyphomycetes)**
- **Hyphomycetales**
  - **Dematiaceae**
    - *Cladosporium cucumerinum*
  - **Moniliaceae**
    - *Verticillium albo-atrum* [severe strain] progressive wilt

**Tuberculariales**
- **Tuberculariaceae**
  - *Fusarium oxysporum* f. sp. *melonis*

**Oomycota**
- **Pythiales**
  - **Pythiaceae**
    - *Pythium aphanidermatum* cottony leak
    - *Pythium mamillatum* root rot
    - *Pythium myriotylum* rhizome and root rot

**Zygomycota: Zygomycetes**
- **Mucorales**
  - **Choanephoraceae**
    - *Choanephora cucurbitarum* blight

**Virus**

**Regulated non-quarantine pests**

None

**Regulated non plant pests**

None

**Non-regulated pests (non-actionable)**

**Non-regulated non-quarantine pests**

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
<td></td>
</tr>
<tr>
<td>Coleoptera</td>
<td></td>
</tr>
</tbody>
</table>
Curculionidae
Asynonychus cervinus Fuller's rose weevil
Listroderes difficilis vegetable weevil
Listroderes obliquus vegetable weevil
Naupactus leucoloma white fringed weevil

Collembola
Sminthuridae
Bourletiella hortensis garden springtail
Sminthurus viridis lucerne flea

Dermaptera
Forficulidae
Forficula auricularia European earwig

Diptera
Anthomyiidae
Delia platura seedcorn maggot

Hemiptera
Pentatomidae
Nezara viridula green vegetable bug

Homoptera
Aleyrodidae
Bemisia argentifolii poinsettia whitefly
Trialeurodes vaporariorum greenhouse whitefly

Aphididae
Acyrthosiphon pisum pea aphid
Aphis craccivora cowpea aphid
cotton aphid
Aphis spiraecola spirea aphid
Aulacorthum solani foxglove aphid
Brevicoryne brassicae cabbage aphid
Lipaphis erysimi turnip aphid
Macrosiphoniella sanborni chrysanthemum aphid
Macrosiphum euphorbiae potato aphid
Rhopalosiphum rufiabdominalis rice root aphid

Coccidae
Saissetia coffeae hemispherical scale

Pseudococcidae
Planococcus citri citrus mealybug

Lepidoptera
Noctuidae
Chrysodeixis eriosoma green garden looper
Helicoverpa armigera tomato fruitworm
Spodoptera litura cluster caterpillar

Thysanoptera
Thripidae
Franklinella occidentalis Western flower thrips
Heliothrips haemorrhoidalis greenhouse thrips
Thrips tabaci onion thrips

Mite

Arachnida
Acarina
Acaridae
- *Tyrophagus longior* seed mite
- *Tyrophagus putrescentiae* mould mite

Eupodidae
- *Halotydeus destructor* oriental mite
- *Penthaleus major* winter grain mite

Tarsonomiidae
- *Polyphagotarsonemus latus* broad mite

Tetranychidae
- *Panonychus citri* citrus red mite
- *Tetranychus cinnabarinus* carmine spider mite
- *Tetranychus ludeni* bean spider mite
- *Tetranychus urticae* two-spotted spider mite

Fungus

Ascomycota

Dothideales
- **Pleosporaceae**
  - *Pleospora tarda* (anamorph *Stemphylium botryosum*) black mould

Unknown Dothideales
- *Didymella bryoniae* (anamorph *Phoma cucurbitacearum*) cucumber stem rot

Erysiphales
- **Erysiphaceae**
  - *Erysiphe cichoracearum* (anamorph *Oidium asteris-punicei*) powdery mildew

Hypocreales
- **Hypocreaceae**
  - *Gibberella acuminata* (anamorph *Fusarium acuminatum*) fusarium storage rot
  - *Gibberella fujikuroi* (anamorph *Fusarium fujikuroi*) fusarium rot
  - *Gibberella gordonia* (anamorph *Fusarium heterosporum*) mould
  - *Gibberella intricans* (anamorph *Fusarium equiseti*) root and stem dry rot
  - *Gibberella zeae* (anamorph *Fusarium graminearum*) mould

Leotiales
- **Sclerotiniaceae**
  - *Botryotinia fuckeliana* (anamorph *Botrytis cinerea*) grey mould
  - *Sclerotinia minor* sclerotinia rot
  - *Sclerotinia sclerotiorum* cottony rot

Phyllachorales
- **Phyllachoraceae**
  - *Glomerella lagenaria* (anamorph *Colletotrichum orbiculare*)

Saccharomycetales
- **Dipodascaceae**
Dipodascus geotrichum  
(anamorph Geotrichum candidum)  sour rot

Basidiomycota: Basidiomycetes

Ceratobasidiales
Ceratobasidiaceae
Thanatephorus cucumeris  
(anamorph Rhizoctonia solani)  rhizoctonia rot

Stereales
Atheliaceae
Athelia rolfsii  
(anamorph Sclerotium rolfsii)  Rolf’s disease

Mitosporic Fungi (Coelomycetes)

Sphaeropsidales
Sphaerioidaceae
Lasiodiplodia theobromae  fruit and stem-end rot
Macrophomina phaseolina  ashy stem blight
Phomopsis sclerotioides
Septoria cucurbitacearum

Unknown Coelomycetes

Unknown Coelomycetes
Colletotrichum coccodes  anthracnose

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales

Dematiaceae
Alternaria cucumerina
Corynespora cassiicola  leaf spot
Epicoccum nigrum  black mould

Moniliaceae
Verticillium dahliae  verticillium wilt

Tuberculariales
Tuberculariaceae
Fusarium culmorum  dry rot
Fusarium oxysporum f. sp. cucumerinum  fusarium rot
Fusarium oxysporum f. sp. niveum
Fusarium pallidoroseum  fusarium rot
Fusarium poae  fusarium rot
Fusarium roseum  fusarium rot
Fusarium solani f. sp. cucurbitae

Unknown Hyphomycetes

Unknown Hyphomycetes
Colletotrichium coccodes  pink rot

Oomycota

Peronosporales
Peronosporaceae
Pseudoperonospora cubensis  downy mildew

Pythiales

Pythiaceae
Phytophthora drechsleri
Pythium irregulare  pythium root and stem rot
Pythium oligandrum
Pythium ultimum  leak

Zygomycota: Zygomycetes
Mucorales
Mucoraceae
Rhizopus arrhizus wet rot
Rhizopus stolonifer rhizopus soft rot

Bacterium
Enterobacteriaceae
Erwinia carotovora subsp. carotovora bacterial soft rot
Pseudomonadaceae
Pseudomonas syringae pv. lachrymans angular leaf spot
Xanthomonas campestris pv. cucurbitae bacterial leaf spot

Viruses
Tobacco ringspot nepovirus (TRSV)
Tobacco spotted wilt virus (TSWV)

Non-regulated non plant pests
None
GRAPE
*Vitis vinifera*

Grapes can be exported to New Zealand under appendices 2 (fruit fly area freedom), 5 (cold storage disinfestation) and 12 (irradiation) to the NZ BQA/IHS.

The export of grapes to New Zealand must include the mandatory treatment of sulphur dioxide and carbon dioxide fumigation for redback spiders as detailed at Section 11 of this Manual.

NOTE: For information on the irradiation pathway please see Attachment 3 – Addendum to BQA SOM 6E – Table Grapes – Irradiation option

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

Growers and packhouse must be registered to grow and pack grapes for export to New Zealand because of the vineyard management controls for the Risk group 2 pests *Conogethes punctiferalis* (yellow peach moth). The Department of Agriculture will be certifying Southern State grapes area free for the Risk group 2 pest *Maconellicoccus hirsutus* (pink hibiscus mealybug).

Regulated pests (actionable)

Quarantine: Risk group 3 pests - Mandatory Treatments

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
<td></td>
</tr>
<tr>
<td>Diptera</td>
<td></td>
</tr>
<tr>
<td>Tephritidae</td>
<td></td>
</tr>
<tr>
<td><em>Bactrocera neohumeralis</em></td>
<td>lesser Queensland fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera tryoni</em></td>
<td>Queensland fruit fly</td>
</tr>
<tr>
<td><em>Ceratitis capitata</em></td>
<td>Mediterranean fruit fly</td>
</tr>
</tbody>
</table>

Quarantine: Risk group 2 pests (actionable) - Management Control Systems

Insect

| Insect          |                              |
| Homoptera      |                              |
| Pseudococcidae | *Maconellicoccus hirsutus*     | pink hibiscus mealybug |
| Lepidoptera    | *Conogethes punctiferalis*     | yellow peach moth    |

Quarantine: Risk group 1 pests (actionable) - Nil permitted in ≤ 600 unit sample. Treatments (where applicable) allowed as corrective action

103
<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coleoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Cerambycidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Dihamnus vastator</em></td>
<td>fig longhorn</td>
</tr>
<tr>
<td><strong>Chrysomelidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Ailica graviida</em></td>
<td>metallic flea beetle</td>
</tr>
<tr>
<td><em>Monolepta australis</em></td>
<td>red-shouldered leaf beetle</td>
</tr>
<tr>
<td><em>Monolepta divisa</em></td>
<td>small monolepta beetle</td>
</tr>
<tr>
<td><strong>Curculionidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Orthorhinus cylindrirostris</em></td>
<td>elephant weevil</td>
</tr>
<tr>
<td><em>Orthorhinus klugi</em></td>
<td>immigrant acacia weevil</td>
</tr>
<tr>
<td><em>Otiolynchus cribricollis</em></td>
<td>cribrate weevil</td>
</tr>
<tr>
<td><strong>Nitidulidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Carpophilus maculatus</em></td>
<td>dried fruit beetle</td>
</tr>
<tr>
<td><strong>Scarabaeidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Dilocrosis atripennis</em></td>
<td>flower chafer</td>
</tr>
<tr>
<td><em>Diphucephala sp.</em></td>
<td>green scarab beetles</td>
</tr>
<tr>
<td><strong>Diptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Drosophilidae</strong></td>
<td>vinegar flies</td>
</tr>
<tr>
<td><em>Drosophila spp.</em></td>
<td></td>
</tr>
<tr>
<td><strong>Hemiptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coreidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Fabricitilis australis</em></td>
<td>squash bug</td>
</tr>
<tr>
<td><em>Mictis profana</em></td>
<td>crusader bug</td>
</tr>
<tr>
<td><strong>Lygaeidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Nysius vinitor</em></td>
<td>Rutherglen bug</td>
</tr>
<tr>
<td><em>Oxyacrenus arctatus</em></td>
<td>coon bug</td>
</tr>
<tr>
<td><strong>Pentatomidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Plautia affinis</em></td>
<td>green stink bug</td>
</tr>
<tr>
<td><strong>Pyrrhocoridae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Dysdercus sidae</em></td>
<td>pale cotton stainer</td>
</tr>
<tr>
<td><strong>Scutelleridae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Scutiphora pedicellata</em></td>
<td>metallic shield bug</td>
</tr>
<tr>
<td><strong>Homoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Aleyrididae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Aleurocanthus spiniferus</em></td>
<td>orange spiny whitefly</td>
</tr>
<tr>
<td><strong>Margarodidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Icerya seychellarum</em></td>
<td>Seychelles scale</td>
</tr>
<tr>
<td><strong>Pseudococcidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Ferrisia virgata</em></td>
<td>striped mealybug</td>
</tr>
<tr>
<td><strong>Lepidoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Lymantriidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Porthesia paradoxa</em></td>
<td>tussock moth</td>
</tr>
<tr>
<td><strong>Noctuidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Agrotis munda</em></td>
<td>brown cutworm</td>
</tr>
<tr>
<td><em>Eudocima fullonia</em></td>
<td>fruit-piercing moth</td>
</tr>
</tbody>
</table>
Psychidae
   *Hyalarcta huebneri*  leaf case moth

Sphingidae
   *Hippotion celerio*  grapevine hawk moth
   *Theretra oldenlandiae*  vine hawk moth

Tortricidae
   *Epiphyas spp. (except E. postvittana)*  Leafrollers

Orthoptera
   Acrididae
      *Austracris guttulosa*  spur-throated locust
      *Valanga irregularis*  giant grasshopper

Thysanoptera
   Phlaeothripidae
      *Haplothrips froggatti*  black plague thrips

Thripidae
   *Scirtothrips dorsalis*  chilli thrips

Mite

Arachnida
   Acarina
   Tenuipalpidae
      *Brevipalpus lewisi*  bunch mite

Tetranychidae
   *Calepitrimerus vitis*  grapeleaf rust mite
   *Eutetranychus orientalis*  pear leaf blister mite

Mollusc

Gastropoda
   Stylommatophora
   Bradybaenidae
      *Bradybaena similaris*  snail

Fungus

Mitosporic Fungi (Coelomycetes)
   Sphaeropsidales
      Sphaerioidaceae
         *Ascochyta ampelina*  leaf spot
         *Ascochyta chlorospora*  white rot

Mitosporic Fungi (Hyphomycetes)
   Hyphomycetales
      Dematiaceae
         *Alternaria vitis*  leaf disease
         *Cladosporium viticola*  cladosporium leaf spot

Weed

Angiospermae
   Asterales
Asteraceae
   Baccharis halimifolia [contaminant] baccharis
   Chondrilla juncea [contaminant] skeleton weed
   Sonchus spp. (except S. arvensis, S. asper, S. oleraceus, S. kirkii) [contaminant] sowthistle
   Xanthium spp. (except X. spinosum) [contaminant] bur

Geraniales
   Zygophyllaceae
   Tribulus terrestris [contaminant] caltrop

Poales
   Poaceae
   Cenchrus spp. (except C. ciliaris) [contaminant] grass
   Echinochloa spp. (except E. crus-galli, E. crus-pavonis, E. esculenta, E. telmatophila) [contaminant] grasses
   Eragrostis curvula [contaminant] African love grass
   Pennisetum alopecuroides [contaminant] Chinese pennisetum
   Pennisetum polystachion [contaminant] mission grass
   Phragmites spp. [contaminant] grass
   Sorghum halepense [contaminant] Johnson grass
   Sorghum x alnum [contaminant] Columbus grass

Solanales
   Solanaceae
   Lycium spp. (except L. barbarum, L. ferocissimum) [contaminant] boxthorn
   Solanum elaegnifolium [contaminant] silverleaf nightshade

Regulated non-quarantine pests

None

Regulated non plant pests

Spider
   Arachnida
   Araneae
   Theridiidae
   Latrodectus hasselti Australian red-back spider

Non-regulated pests (non-actionable)

Non-regulated non-quarantine pests

Pest Scientific Name Common Name

Insect
### Insecta

#### Coleoptera

##### Curculionidae

- *Otiorhynchus sulcatus* black vine weevil

##### Nitidulidae

- *Carpophilus dimidiatus* corn sap beetle
- *Carpophilus hemipterus* dried fruit beetle
- *Urophorus humeralis* dried fruit beetle

##### Scarabaeidae

- *Heteronychus arator* black beetle

#### Hemiptera

##### Pentatomidae

- *Nezara viridula* green vegetable bug

#### Homoptera

##### Aleyrodidae

- *Trialeurodes vaporariorum* greenhouse whitefly

##### Aphididae

- *Aphis craccivora* cowpea aphid
- *Aphis gossypii* cotton aphid
- *Aphis spiraecola* spirea aphid
- *Macrosiphum euphorbiae* potato aphid

##### Coccidae

- *Coccus persicae* grapevine scale
- *Parasaissetia nigra* nigra scale
- *Parthenolecanium corni* European fruit scale

##### Diaspididae

- *Aspidiotus nerii* oleander scale
- *Quadraspidiotus perniciosus* San Jose scale

##### Phylloxeridae

- *Viteus vitifoliae* grape phylloxera

##### Pseudococcidae

- *Planococcus citri* citrus mealybug
- *Pseudococcus calceolariae* citrophilus mealybug
- *Pseudococcus longispinus* longtailed mealybug
- *Pseudococcus viburni* obscure mealybug

#### Lepidoptera

##### Agaristidae

- *Phalaenoides glycinae* grapevine moth

##### Noctuidae

- *Spodoptera litura* cluster caterpillar

##### Tortricidae

- *Cydia molesta* oriental fruit moth
- *Epiphyas postvittana* light brown apple moth

#### Thysanoptera

##### Thripidae

- *Frankliniella occidentalis* western flower thrips
- *Heliothrips haemorrhoidalis* greenhouse thrips
- *Thrips imaginis* plague thrips
- *Thrips tabaci* onion thrips

#### Mite
Arachnida
Acarina
Tarsonemidae
Polyphagotarsonemus latus broad mite
Tenuipalpidae
Brevipalpus californicus bunch mite
Tetranychidae
Panonychus ulmi European red mite
Tetranychus urticae two-spotted spider mite

Mollusc
Gastropoda
Stylommatophora
Helicidae
Helix aspersa common garden snail

Fungus
Ascomycota
Diatrypales
Diatrypaceae
Eutypa armeniaca eutypa dieback
Eutypa lata eutypa dieback

Dothideales
Botryosphaeriaceae
Botryosphaeria dothidea (anamorph Fusicoecum aeculi) canker

Elsinoaceae
Elsinoe ampelina (anamorph Sphaceloma ampelinum) anthracnose

Mycosphaerellaceae
Mycosphaerella personata (anamorph Pseudocercospora vitis) isariopsis blight
Mycosphaerella tassiana (anamorph Cladosporium herbarum) black leaf spot

Erysiphales
Erysiphaceae
Uncinula necator (anamorph Oidium tuckeri) powdery mildew

Leotiales
Sclerotiniaceae
Botryotinia fuckeliana (anamorph Botrytis cinerea) grey mould
Sclerotinia sclerotiorum cottony rot

Phyllachorales
Phyllachoraceae
Glomerella cingulata (anamorph Colletotrichum gloeosporioides) bitter rot

Mitosporic Fungi (Coelomycetes)
Sphaeropsidales
Sphaerioidaceae
**Fusicoccum luteum**  
**Macrophomina phaseolina**  
**Phoma pomorum**  
**Phomopsis viticola**

**Unknown Coelomycetes**  
**Unknown Coelomycetes**  
Greeneria uvicola

**Mitosporic Fungi (Hyphomycetes)**

**Hyphomycetales**

**Moniliaceae**  
Aspergillus niger

**Oomycota**

**Peronosporales**

**Peronosporaceae**  
Plasmopara viticola

**Zygomycota: Zygomycetes**

**Mucorales**

**Mucoraceae**  
Rhizopus arrhizus  
Rhizopus stolonifer

**Weed**

**Angiospermae**

**Asterales**

**Asteraceae**  
Sonchus arvensis [contaminant]  
Sonchus asper [contaminant]  
Sonchus kirkii [contaminant]  
Sonchus oleraceus [contaminant]  
Xanthium spinosum [contaminant]

**Poales**

**Poaceae**  
Cenchrus ciliaris [contaminant]  
Digitaria aequiglumis [contaminant]  
Digitaria ciliaris [contaminant]  
Digitaria ischaemum [contaminant]  
Digitaria sanguinalis [contaminant]  
Digitaria setigera [contaminant]  
Digitaria violascens [contaminant]  
Echinochloa crus-galli [contaminant]  
Echinochloa crus-pavonis [contaminant]  
Echinochloa esculenta [contaminant]  
Echinochloa telmatophila [contaminant]  
Pennisetum macrourum [contaminant]

**Solanales**

**Solanaceae**  
Lycium barbarum [contaminant]  
Lycium ferocissimum [contaminant]

**Non-regulated non plant pests**
**LYCHEE**

*Litchi chinensis*

Lychees can be exported to New Zealand under the Appendix No. 12 - Irradiation of the NZ BQA/IHS.

Growers and packhouse do not need to be specifically registered for the New Zealand export program for this commodity.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by Department of Agriculture/MPI.

Regulated Pest List Commodity Sub-class: Fresh Fruit/Vegetables *Litchi chinensis* from Australia

### Regulated pests (actionable)

**Quarantine: Risk group 3 pests (actionable) – Mandatory Treatments**

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Amblypelta lutescens</em></td>
<td>banana spotting scale</td>
</tr>
<tr>
<td><em>Amblypelta nitida</em></td>
<td>fruit spotting scale</td>
</tr>
<tr>
<td><em>Bactrocera jarvisi</em></td>
<td>Jarvis’s fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera neohumeralis</em></td>
<td>lesser Queensland fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera tryoni</em></td>
<td>Queensland fruit fly</td>
</tr>
<tr>
<td><em>Ceroplastes rubens</em></td>
<td>pink/red wax scale</td>
</tr>
<tr>
<td><em>Cryptophlebia ombrodelta</em></td>
<td>Seychelles scale</td>
</tr>
<tr>
<td><em>Ischnaspis longirostris</em></td>
<td>black thread scale</td>
</tr>
<tr>
<td><em>Nysius vinitor</em></td>
<td>Rutherglen bug</td>
</tr>
<tr>
<td><em>Bipolaris hawaiensis</em></td>
<td>fungi</td>
</tr>
<tr>
<td><em>Pestalotiopsis sp.</em></td>
<td>fungi</td>
</tr>
</tbody>
</table>
MANGO
*Mangifera indica*

Mangoes can be exported to New Zealand under the Appendix No. 12 - Irradiation of the NZ BQA/IHS.

Growers and packhouse do not need to be specifically registered for the New Zealand export program for this commodity.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

### Regulated quarantine pests (actionable)

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bactrocera aquilonis</em></td>
<td>Northern Territory fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera cucumis</em></td>
<td>cucumber fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera frauenfeldi</em></td>
<td>fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera jarvisi</em></td>
<td>Jarvis’s fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera kraussi</em></td>
<td>fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera murrayi</em></td>
<td>fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera neohumeralis</em></td>
<td>lesser Queensland fruit fly</td>
</tr>
<tr>
<td><em>Bactrocera opiliae</em></td>
<td>false Oriental Fruit Fly</td>
</tr>
<tr>
<td><em>Bactrocera tryoni</em></td>
<td>Queensland fruit fly</td>
</tr>
<tr>
<td><em>Ceratitis capitata</em></td>
<td>Mediterranean fruit fly</td>
</tr>
<tr>
<td><em>Dirioxa pornia</em></td>
<td>Island fruit fly</td>
</tr>
<tr>
<td><em>Amblypelta lutescens</em></td>
<td>banana spotting bug</td>
</tr>
<tr>
<td><em>Amblypelta nitida</em></td>
<td>fruit spotting bug</td>
</tr>
<tr>
<td><em>Aonidiella orientalis</em></td>
<td>oriental yellow scale</td>
</tr>
<tr>
<td><em>Aspidiotus destructor</em></td>
<td>coconut scale</td>
</tr>
<tr>
<td><em>Chrysomphalus dictyospermi</em></td>
<td>dictyospermum scale</td>
</tr>
<tr>
<td><em>Conogethes punctiferalis</em></td>
<td>yellow peach moth</td>
</tr>
<tr>
<td><em>Eudocima aurantia</em></td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td><em>Eudocima cocalus</em></td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td><em>Eudocima fullonia</em></td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td><em>Eudocima irridescens</em></td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td><em>Eudocima jordani</em></td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td><em>Eudocima materna</em></td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td><em>Eudocima salaminia</em></td>
<td>fruit-piercing moth</td>
</tr>
<tr>
<td><em>Frankliniella schultzei</em></td>
<td>flower thrips</td>
</tr>
<tr>
<td><em>Heliothrips haemorrhoidalis</em></td>
<td>greenhouse thrips</td>
</tr>
<tr>
<td><em>Helopeltis clavifer</em></td>
<td></td>
</tr>
<tr>
<td><em>Icerya aegyiatica</em></td>
<td>Egyptian fluted scale</td>
</tr>
<tr>
<td><em>Idioscopus clypealis</em></td>
<td>mango hopper</td>
</tr>
<tr>
<td><em>Idioscopus nitidulus</em></td>
<td>mango hopper</td>
</tr>
<tr>
<td><em>Ischnaspis longirostris</em></td>
<td>black thread scale</td>
</tr>
<tr>
<td><em>Isotenes miserana</em></td>
<td>orange fruitborer</td>
</tr>
<tr>
<td><em>Lobesia sp.</em></td>
<td>European grape berry moth</td>
</tr>
<tr>
<td><em>Monolepta australis</em></td>
<td>red-shouldered leaf beetle</td>
</tr>
</tbody>
</table>
Monolepta divisa  small monolepta beetle  
Nipaecoccus vastator  karoo thorn mealybug  
Ophiusa tirhaca  
Penicillaria jocosatrix  mango tipborer  
Phenacaspis dilatata  mango scale  
Planococcus citri  Citrus mealybug  
Pseudaulacaspis cockerelli  Cockerell’s scale  
Rastrococcus sp.  
Rhyparida limbatipennis  
Saissetia miranda  Mexican black scale  
Selenothrips rubrocinctus  redbanded thrips  
Sternochetus mangiferae  mango seed weevil  
Asterina punctiformis  
Chaetothyrina tenuissima  stem sooty blotch  
Cytosphaera mangiferae  stem-end rot  
Elsinoe mangiferae  mango scab  
(ananomorph Sphaceloma mangiferae)  
Fusicoccum mangiferae  stem-end rot  
Nattrassia mangiferae  grey leaf spot of mango  
Pestalotiopsis mangiferae  storage rot  
Pestalotiopsis mangifolia  mango blight  
Pestalotiopsis theae  mango leaf spot  
Pestalotiopsis virgatula  stem end rot  
Phomopsis mangiferae  mango powdery mildew  
Pythium mangiferae  (ananomorph Oidium mangiferae)  
Schizoparme straminea  schizoparme fruit rot  
(ananomorph Coniella)  

Non-regulated pests (non actionable)

**Pest Scientific Name** | **Common Name**
---|---
Aonidiella aurantii  | California red scale  
Ceroplastes destructor  | white wax scale  
Epiphyas postvittana  | light brown apple moth  
Helicoberpa armigera  | tomato fruitworm  
Heliothrips haemorrhoidalis  | greenhouse thrips  
Hemiberlesia lataniae  | latania scale  
Hemiberlesia rapax  | greedy scale  
Icerya purchasi  | cottony cushion scale  
Parasaisssetia nigra  | nigra scale  
Pseudococcus longispinus  | long tailed mealybug  
Saissetia coffeeae  | helmet scale  
Toxoptera aurantii  | black citrus aphid  
Toxoptera citricida  | brown citrus aphid  
Polyphagotarsonemus latus  | broad mite  
Tetranychus urticae  | two-spotted spider mite  
Alternaria alternata  | black stalk rot

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Botryosphaeria dothidea (anamorph Fusicoccum aesculi) - canker
Botryosphaeria parva (anamorph Fusicoccum parvum) - canker
Botryosphaeria rhodina - gummosis
Botryosphaeria ribis (anamorph Lasiodiplodia theobromae) - canker
Botryotinia fuckeliana (anamorph Botrytis cinerea) - grey mould
Cladosporium cladosporioides - cladosporium leaf spot
Cochliobolus hawaiensis - leaf spot, seed rot
Colletotrichum acutatum - anthracnose
Colletotrichum coccodes - anthracnose
Dipodascus Geotrichum (anamorph Geotrichum candidum) - sour rot
Dothiorella aromatica (anamorph Oidium asterispunicei) - stem-end rot
Epicoccum purpurascens - black mould
Erysiphe cichoracearum - powdery mildew
Glomerella cingulata (anamorph Colletotrichum gloeosporioides) - anthracnose
Glomerella lagenaria (anamorph Colletotrichum orbiculare) - leaf spot
Pestalotiopsis funereal - pestalotiopsis rot
Pestalotiopsis versicolor - buckeye rot
Phytophthora nicotianae - facial eczema fungus
Pithomyces chartarum - rhizopus soft rot
Pleospora allii (anamorph Stemphylium vesicarium) - black mould
Rhizopus stolonifer - rhizopus soft rot
Thanatephorus cucumeris (anamorph Rhizoctonia solani) - rhizoctonia rot
MELON
*Cucumis melo*

Rockmelons can be exported to New Zealand under the following appendices:

- Appendix 2 (fruit fly area freedom)
- Appendix 4 (dimethoate treatment)
- Appendix 11 (winter window) and Appendix 10 (field control programme).

Honeydew melons can be exported to New Zealand under the following appendices:

- Appendix 2 (fruit fly area freedom)
- Appendix 4 (dimethoate treatment) and Appendix 10 (field control programme)
- Appendix 11 (winter window) and Appendix 10 (field control programme).

A number of Risk Group 2 pests have been listed for melons. The Department of Agriculture can certify freedom from these pests based on the following:

*Bemisia tabaci*

1. The lifecycle of *B. tabaci* is carried out on the underside of host plant leaves, and there is no association of this pest with the fruit.
2. If a situation arose where *B. tabaci* was found to be damaging crops, application of chemicals (registered for use against *B. tabaci*) such as D-C Tron would provide the necessary control of this pest.
3. If by chance *B. tabaci* were present on harvested *Cucumis melo* fruit as a hitch-hiker, the pre-export dimethoate dip treatment (appendix 4 to the NZ BQA) would disrupt/dislodge the animal and cause it to seek another place to rest.
4. Pre-export inspection of fruit will identify the presence of *B. tabaci*, and the fruit would be rejected for export to New Zealand.
5. Historical records show that *B. tabaci* has never been detected on melon fruit during Department of Agriculture pre-export inspection.

Note: item 3 above does not apply to melon fruit exported to New Zealand under appendix 2 (fruit fly area freedom) or 11 (winter window) to the NZ BQA. It is felt however, that items 1, 2, 4, and 5 provide an appropriate level of confidence in certifying freedom from this pest.

*Thrips palmi*

1. If *T. palmi* were present on harvested *Cucumis melo* fruit, the pre-export dimethoate dip treatment (appendix 4 to the NZ BQA) would disrupt/dislodge and possibly kill the animal.
2. Pre-export inspection of fruit will identify the presence of *T. palmi*, and the fruit would be rejected for export to New Zealand.
3. Historical records show that *T. palmi* has never been detected on melon fruit during Department of Agriculture pre-export inspection.

Note: item 1 above does not apply to melon fruit exported to New Zealand under appendix 2 (fruit fly area freedom) or 11 (winter window) to the NZ BQA. It is felt however, that items 2 and 3 provide an appropriate level of confidence in certifying freedom from this pest.

*Tetranychus kanzawai*
1. Dimethoate is registered for in-field use against *Tetranychus* spp. Honeydew melons exported to New Zealand under appendices 4 and 11 to the NZ BQA are required to undergo an in-field spray program (using dimethoate) for the control of fruit fly. This program is also effective against *Tetranychus* spp. Similarly, rockmelons exported to New Zealand under appendix 11 are required to undergo an in-field spray program.

2. Melons exported to New Zealand under appendix 4 to the NZ BQA are required to undergo a pre-export dimethoate dip treatment. This treatment is effective against *Tetranychus* spp.

3. Pre-export inspection of fruit will identify the presence of *T. kanzawai*, and the fruit would be rejected for export to New Zealand.

4. Historical records show that *T. kanzawai* has never been detected on melon fruit during Department of Agriculture pre-export inspection.

During any inspection, should a pest be found that is not contained in the Pest Lists for this commodity, the pest must be regarded as a Quarantine Risk Group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

### Regulated pests (actionable)

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quarantine: Risk group 3 pests (actionable) - Mandatory Treatments</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Diptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Tephritidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bactrocera cucumis</em></td>
<td>cucumber fruit fly</td>
</tr>
<tr>
<td><em>Ceratitis capitata</em></td>
<td>Mediterranean fruit fly</td>
</tr>
<tr>
<td><strong>Quarantine: Risk group 2 pests (actionable) - Management Control Systems</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Homoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Aleyrodidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bemisia tabaci</em></td>
<td>sweet potato whitefly</td>
</tr>
<tr>
<td><strong>Thysanoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Thripidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Thrips palmi</em></td>
<td>melon thrips</td>
</tr>
<tr>
<td><strong>Mite</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Arachnida</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Acarina</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Tetranychidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Tetranychus kanzawai</em></td>
<td>kanzawa mite</td>
</tr>
</tbody>
</table>
Quarantine: Risk group 1 pests (actionable) - Nil permitted in ≤ 600 unit sample. Treatments (where applicable) allowed as corrective action.

Insect

Insecta

Coleoptera

Cerambycidae

Apomecyna histrio
cucurbit stemborer

Chrysomelidae

Aulacophora foveicollis
red pumpkin beetle
Aulacophora hilaris
pumpkin beetle
Monolepta australis
red-shouldered leaf beetle

Coccinellidae

Epilachna boisdvali
epilachna beetle
Epilachna vigintioctomaculata
leaf feeding coccinellid
Epilachna vigintioctopunctata
28 Spotted ladybird
Henosepilachna suffusa

Curculionidae

Diptera

Muscidae

Atherigona orientalis
muscid fly

Phoridae

Megaselia sp.

Tephritidae

Dacus axan
fruit fly
Dacus petioliforma
fruit fly

Hemiptera

Coreidae

Amblypelta nitida
fruit-spotting bug
Fabrictilis australis
squash bug
Fabrictilis gonagra
passionvine bug

Dinidoridae

Megymenum insulare
cucurbit shield bug

Lygaeidae

Nysius vinitor
Rutherglen bug

Miridae

Creontiades dilutes
green mirid
Halticus tibialis
plant bug

Homoptera

Aleyrodidae

Trialeurodes spp.
(except T. vaporariorum)
whiteflies

Aphididae

Myzus persicae [vect.]
green peach aphid

Pseudococcidae

Dysmicoccus brevipes
pineapple mealybug
Ferrisia virgata
striped mealybug
Planococcus minor
Pacific mealybug

Lepidoptera

Noctuidae
*Helicoverpa assulta*
*Proxenus tenuis*
*Spodoptera exigua*

**Pyralidae**
*Diaphania indica*
*Hellula undalis*
*Spoladea recurvalis*

**Thysanoptera**
**Thripidae**
*Thrips hawaiiensis*

**Mite**

**Arachnida**
**Acarina**

**Tetranychidae**
*Eutetranychus orientalis*  pear leaf blister mite
*Tetranychus desertorum*  desert spider mite
*Tetranychus lombardinii*  southern lobed mite
*Tetranychus neocaledonicus*  Mexican spider mite

**Fungus**

**Ascomycota**
*Unknown Ascomycota*

**Hyponectriaceae**
*Monographella cucumerina* (anamorph *Microdochium tabacinum*)

**Mitosporic Fungi (Coelomycetes)**
**Sphaeropsidales**
**Sphaerioidaceae**
*Phomopsis cucurbitae*

**Mitosporic Fungi (Hyphomycetes)**
**Hyphomycetales**
**Dematiaceae**
*Cercospora citrullina*  cigar-end
*Ulocladium sp.*

**Tuberculariales**
**Tuberculariaceae**
*Fusarium chlamydosporum*  root and stem rot
*Fusarium concolor*
*Fusarium oxysporum f. sp. melonis*

**Oomycota**
**Pythiales**
**Pythiaceae**
*Pythium aphanidermatum*  cottony leak

**Zygomycota: Zygomycetes**
**Mucorales**
**Choanephoraceae**
*Choanephora cucurbitarum*  blight

**Bacterium**
Pseudomonadaceae

Acidovorax avenae subsp. Citrulli  

bacterial rot

Regulated non-quarantine pests

None

Regulated non plant pests

None

Non-regulated pests (non-actionable)

Non-regulated non-quarantine pests

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coleoptera</strong></td>
<td></td>
</tr>
<tr>
<td>Curculionidae</td>
<td></td>
</tr>
<tr>
<td><em>Asynonychus cervinus</em></td>
<td>Fuller's rose weevil</td>
</tr>
<tr>
<td><em>Naupactus leucoloma</em></td>
<td>white fringed weevil</td>
</tr>
<tr>
<td><em>Listroderes difficilis</em></td>
<td>vegetable weevil</td>
</tr>
<tr>
<td><strong>Collembola</strong></td>
<td></td>
</tr>
<tr>
<td>Sminthuridae</td>
<td></td>
</tr>
<tr>
<td><em>Bourletiella hortensis</em></td>
<td>garden springtail</td>
</tr>
<tr>
<td><em>Sminthurus viridis</em></td>
<td>lucerne flea</td>
</tr>
<tr>
<td><strong>Dermoptera</strong></td>
<td></td>
</tr>
<tr>
<td>Forficulidae</td>
<td></td>
</tr>
<tr>
<td><em>Forficula auricularia</em></td>
<td>European earwig</td>
</tr>
<tr>
<td><strong>Diptera</strong></td>
<td></td>
</tr>
<tr>
<td>Anthomyiidae</td>
<td></td>
</tr>
<tr>
<td><em>Delia platura</em></td>
<td>seedcorn maggot</td>
</tr>
<tr>
<td><strong>Hemiptera</strong></td>
<td></td>
</tr>
<tr>
<td>Pentatomidae</td>
<td></td>
</tr>
<tr>
<td><em>Nezara viridula</em></td>
<td>green vegetable bug</td>
</tr>
<tr>
<td><strong>Homoptera</strong></td>
<td></td>
</tr>
<tr>
<td>Aleyrodidae</td>
<td></td>
</tr>
<tr>
<td><em>Bemisia argentifolii</em></td>
<td>poinsettia whitefly</td>
</tr>
<tr>
<td><em>Trialeurodes vaporariorum</em></td>
<td>greenhouse whitefly</td>
</tr>
<tr>
<td><strong>Aphididae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Aphis craccivora</em></td>
<td>cowpea aphid</td>
</tr>
<tr>
<td><em>Aphis gossypii</em></td>
<td>cotton aphid</td>
</tr>
<tr>
<td><em>Aulacorthum solani</em></td>
<td>foxglove aphid</td>
</tr>
<tr>
<td><em>Lipaphis erysimi</em></td>
<td>turnip aphid</td>
</tr>
<tr>
<td><em>Macrosiphum euphorbiae</em></td>
<td>potato aphid</td>
</tr>
<tr>
<td><em>Rhopalosiphum rufiabdominalis</em></td>
<td>rice root aphid</td>
</tr>
<tr>
<td><em>Toxoptera aurantii</em></td>
<td>black citrus aphid</td>
</tr>
<tr>
<td><em>Toxoptera citricidus</em></td>
<td>brown citrus aphid</td>
</tr>
</tbody>
</table>
Pseudococcidae
- Planococcus citri  
  citrus mealybug
- Pseudococcus viburni  
  obscure mealybug

Lepidoptera
Noctuidae
- Helicoverpa armigera  
  tomato fruitworm
- Spodoptera litura  
  cluster caterpillar

Thysanoptera
Thripidae
- Frankliniella occidentalis  
  western flower thrips
- Thrips tabaci  
  onion thrips

Mite
Arachnida
Acarina
Acaridae
- Tyrophagus putrescentiae  
  mould mite
Eupodidae
- Halotydeus destructor  
  oriental mite
- Penthauleus major  
  winter grain mite
Tarsonemidae
- Polyphagotarsonemus latus  
  broad mite
Tetranychidae
- Panonychus citri  
  citrus red mite
- Petrobia lateens  
  brown wheat mite
- Tetranychus cinnabarinus  
  carmine spider mite
- Tetranychus ludeni  
  bean spider mite
- Tetranychus urticae  
  two-spotted spider mite

Fungus
Ascomycota
Dothideales
Mycosphaerellaceae
- Mycosphaerella tassiana  
  (anamorph Cladosporium herbarum)  
  black leaf spot
Unknown Dothideales
- Didymella bryoniae  
  (anamorph Phoma cucurbitacearum)  
  cucumber stem rot
Erysiphales
Erysipheaceae
- Erysiphe cichoracearum  
  (anamorph Oidium asteris-punicei)  
  powdery mildew
Hypocreales
Hypocreaceae
- Gibberella acuminata  
  (anamorph Fusarium acuminatum)  
  fusarium storage rot
- Gibberella avenacea  
  fusarium stem canker
- Gibberella baccata  
  (anamorph Fusarium lateritium)  
  fusarium rot
Gibberella intricans  
(anamorph Fusarium equiseti)  root and stem dry rot
Nectria haematococca  
(anamorph Fusarium solani)  fusarium fruit rot

Leotiales
Sclerotiniaceae
Botryotinia fuckeliana  
(anamorph Botrytis cinerea)  grey mould
Sclerotinia sclerotiorum  cottony rot

Phyllachorales
Phyllachoraceae
Glomerella lagenaria  
(anamorph Colletotrichum orbiculare)

Saccharomycetales
Dipodascaceae
Dipodascus geotrichum  
(anamorph Geotrichum candidum)  sour rot

Basidiomycota: Basidiomycetes
Ceratobasidiales
Ceratobasidiaceae
Thanatephorus cucumeris  
(anamorph Rhizoctonia solani)  rhizoctonia rot

Stereales
Atheliaceae
Athelia rolfsii  
(anamorph Sclerotium rolfsii)  Rolf's disease

Mitosporic Fungi (Coelomycetes)
Sphaeropsidales
Sphaerioidaceae
Lasiodiplodia theobromae  fruit and stem-end rot
Macrophoma phaseolina  ashy stem blight
Septoria cucurbitacearum

Mitosporic Fungi (Hyphomycetes)
Hyphomycetales
Dematiaceae
Alternaria alternata  black stalk rot
Alternaria cucumerina
Alternaria tenuissima  alternaria mould
Cladosporium oxysporum  cladosporium leaf spot
Ulocladium cucurbitae

Moniliaceae
Verticillium dahliae  verticillium wilt

Tuberculariales
Tuberculariaceae
Fusarium moniliforme var. intermedium  mould
Fusarium oxysporum  leaf spot
Fusarium oxysporum f. sp. niveum
Fusarium solani f. sp. cucurbitae

Unknown Hyphomycetes

Unknown Hyphomycetes
Trichotheicum roseum  pink rot

Oomycota
Peronosporales
  Peronosporaceae
   *Pseudoperonospora cubensis*  downy mildew

Zygomycota: Zygomycetes
Mucorales
  Mucoraceae
   *Rhizopus stolonifer*  rhizopus soft rot

**Bacterium**

Pseudomonadaceae
  *Pseudomonas syringae*  bacterial blast
  *Pseudomonas syringae pv. lachrymans*  angular leaf spot
  *Xanthomonas campestris pv. cucurbitae*  bacterial leaf spot

**Virus**

tobacco ringspot nepovirus [TRSV]

**Non-regulated non plant pests**

None
PAPAYA
Carica papaya

Papaya can be exported to New Zealand under Appendix No. 12 - Irradiation of the NZ BQA.

Growers and packhouse choosing 289 Gray (Gy) irradiation for papaya do not need to be specifically registered for the New Zealand export program.

Growers and packhouse choosing 150 Gy irradiation and in-field controls for papaya need to be specifically registered for the New Zealand export program.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

Conogethes punctiferalis (yellow peach moth) is listed for papaya, and the Department of Agriculture can certify freedom from this pest based on the following:

<table>
<thead>
<tr>
<th>Conogethes punctiferalis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If infield controls for Conogethes punctiferalis are carried out, fruit will be irradiated at 150 Gy prior to export.</td>
</tr>
<tr>
<td>2. Where irradiation is chosen as the pest control activity for Conogethes punctiferalis a minimum dose of 289 Gy must be applied prior to export. This treatment will be considered to be a generic treatment for all regulated arthropod pests on the Australian papaya pest list, listed below.</td>
</tr>
</tbody>
</table>

Regulated quarantine pests (actionable)

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asperisporium caricae</td>
<td>black spot</td>
</tr>
<tr>
<td>Phomopsis caricae-papayae</td>
<td>wet fruit rot</td>
</tr>
<tr>
<td>Phytophthora capsici</td>
<td>buckeye rot</td>
</tr>
<tr>
<td>Phytophthora palmivora</td>
<td>black rot</td>
</tr>
<tr>
<td>Bactrocera cucuminis</td>
<td>cucumber fruit fly #</td>
</tr>
<tr>
<td>Bactrocera frauenfeldi</td>
<td>fruit fly #</td>
</tr>
<tr>
<td>Bactrocera jarvisi</td>
<td>Jarvis’s fruit fly #</td>
</tr>
<tr>
<td>Bactrocera musae</td>
<td>banana fruit fly #</td>
</tr>
<tr>
<td>Bactrocera neohumeralis</td>
<td>lesser Queensland fruit fly #</td>
</tr>
<tr>
<td>Bactrocera tryoni</td>
<td>Queensland fruit fly #</td>
</tr>
<tr>
<td>Ceratitis capitata</td>
<td>Mediterranean fruit fly #</td>
</tr>
<tr>
<td>Dirioxa pornia</td>
<td>island fruit fly</td>
</tr>
<tr>
<td>Aleurodicus dispersus</td>
<td>spiraling whitefly</td>
</tr>
<tr>
<td>Amblypetla lutescens</td>
<td>banana spotting bug</td>
</tr>
<tr>
<td>Amblypetla nitida</td>
<td>fruit spotting bug</td>
</tr>
<tr>
<td>Aonidiella orientalis</td>
<td>oriental yellow scale</td>
</tr>
<tr>
<td>Aspidiotus destructor</td>
<td>coconut scale</td>
</tr>
<tr>
<td>Carpophilis maculatus</td>
<td>dried fruit beetle</td>
</tr>
<tr>
<td>Chrysomphalus dictyospermi</td>
<td>dictyospermum scale</td>
</tr>
</tbody>
</table>
**Conogethes punctiferalis**  
*yellow peach moth #*

**Eucalymnatus tessellatus**  
tessellated scale

**Eudocima aurantia**  
fruit-piercing moth

**Eudocima cocalus**  
fruit-piercing moth

**Eudocima fullonia**  
fruit-piercing moth

**Eudocima irridescens**  
fruit-piercing moth

**Eudocima jordani**  
fruit-piercing moth

**Eudocima materna**  
fruit-piercing moth

**Eudocima salaminia**  
fruit-piercing moth

**Ferrisia virgata**  
striped mealybug

**Pericyma cruegeri**  
poinciana

_looper_

**Pseudaulacaspis cockerelli**  
Cockerell’s scale

**Papaya ringspot virus (type P strain)**  
PRSV-Type

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**Non-regulated pests (non-actionable)**

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Brevipalpus phoenicis</em></td>
<td>passion vine mite</td>
</tr>
<tr>
<td><em>Polyphagotarsonemus latus</em></td>
<td>broad mite</td>
</tr>
<tr>
<td><em>Tetranychus urticae</em></td>
<td>twospotted spider mite</td>
</tr>
<tr>
<td><em>Alternaria alternata</em></td>
<td>black stalk rot</td>
</tr>
<tr>
<td><em>Botryosphaeria rhodina</em> (anamorph <em>Lasiodiplodia theobromae</em>)</td>
<td>gummosis</td>
</tr>
<tr>
<td><em>Botryosphaeria ribis</em></td>
<td>canker</td>
</tr>
<tr>
<td><em>Colletotrichum acutatum</em></td>
<td>anthracnose</td>
</tr>
<tr>
<td><em>Colletotrichum capsici</em></td>
<td>anthracnose</td>
</tr>
<tr>
<td><em>Colletotrichum dematium</em></td>
<td>anthracnose</td>
</tr>
<tr>
<td><em>Corynespora cassisola</em></td>
<td>leaf spot</td>
</tr>
<tr>
<td><em>Erysiphe cruciferarum</em></td>
<td>powdery mildew</td>
</tr>
<tr>
<td><em>Fusarium pallidoroseum</em></td>
<td>fruit core rot</td>
</tr>
<tr>
<td><em>Glomerella cingulata</em> (anamorph <em>Colletotrichum gloeosporioides</em>)</td>
<td>anthracnose</td>
</tr>
<tr>
<td><em>Leveillula taurica</em></td>
<td>powdery mildew</td>
</tr>
<tr>
<td><em>Mycosphaerella caricae</em></td>
<td>leaf spot</td>
</tr>
<tr>
<td>(anamorph <em>Phoma caricae-papayae</em>)</td>
<td></td>
</tr>
<tr>
<td><em>Phytophthora nicotianae</em></td>
<td>buckeye rot</td>
</tr>
<tr>
<td><em>Rhizopus stolonifer</em></td>
<td>rhizopus soft rot</td>
</tr>
<tr>
<td><em>Aphis spiraecola</em></td>
<td>spirae aphid</td>
</tr>
</tbody>
</table>

# Denotes high impact pest
PINEAPPLE
Ananas comosus

Pineapple can be exported to New Zealand under the Non-host Treatment Appendix No. 6 of the NZ BQA/IHS, based on non-host status for the variety ‘Smooth Cayenne’ or approved varieties that are genetically ≥ 50 per cent ‘Smooth Cayenne’.

Approved varieties of pineapple covered by this treatment appendix are:

- ‘Smooth Cayenne’
- ‘Aus-Jubilee’
- ‘MD-2’ (also known as ‘73-114’)
- ‘73-50’ (also known as ‘CO-2’)

Growers and packhouse do not need to be specifically registered for the New Zealand export program.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk Group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

Regulated pests (actionable)

Quarantine: Risk group 3 pests (actionable) – Mandatory Treatments

None

Quarantine: Risk group 2 pests (actionable) – Management Control Systems

None

Quarantine: Risk group 1 pests (actionable) – Nil permitted in ≤ 600 unit sample. Treatments (where applicable) allowed as corrective action.

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
<td></td>
</tr>
<tr>
<td>Coleoptera</td>
<td></td>
</tr>
<tr>
<td>Nitidulidae</td>
<td></td>
</tr>
<tr>
<td>Brachyplus basalis</td>
<td>dried fruit beetle</td>
</tr>
<tr>
<td>Carpophilus marginellus</td>
<td>dried fruit beetle</td>
</tr>
<tr>
<td>Carpophilus oculatus</td>
<td>dried fruit beetle</td>
</tr>
<tr>
<td>Urophorus humeralis</td>
<td>dried fruit beetle</td>
</tr>
<tr>
<td>Ptinidae</td>
<td></td>
</tr>
<tr>
<td>Mezium americanum</td>
<td>American spider beetle</td>
</tr>
<tr>
<td>Scarabaeidae</td>
<td></td>
</tr>
</tbody>
</table>
Anoplognathus porosus  
Christmas beetle
Antitrogus mussoni  
cane grub
Lepidiota sp.  
cane grub
Rhopaea spp.  
pasture white grubs

Diptera
Muscidae
Atherigona orientalis  
muscid fly

Homoptera
Diaspididae
Diaspis bromeliae  
 pineapple scale
Pseudococcidae
Dysmicoccus brevipes  
 pineapple mealybug

Isoptera
Rhinotermitidae
Rhinotermes intermedius  
termite

Lepidoptera
Tineidae
Opogona glycyphaga  
sugarcane bud moth

Mite

Arachnida
Acarina
Acaridae
Tyrophagus sp.  
mould mite
Histiomidae
Histiostoma sp.  
mite
Tarsonemidae
Tarsonemus ananas  
pineapple mite
Tenuipalpidae
Dolichotetranychus floridanus  
pineapple false spider mite

Nematode

Secernentea
Tylenchida
Hoplolaimidae
Rotylenchus reniformis
Pratylenchidae
Pratylenchus brachyurus  
root lesion nematode

Symphylid

Symphyla
Unknown Symphyla
Symphylidae
Hanseniella sp.  
symphylan

Fungus

Mitosporic Fungi (Hyphomycetes)
Hyphomycetes
Dematiaceae
Thielaviopsis paradoxa
Moniliaceae
Penicillium funiculosum

Bacterium

Enterobacteriaceae
Erwinia ananas
marbling of fruit

Virus
mealybug wilt closterovirus

Regulated non-quarantine pests
None

Regulated non plant pests/unwanted organisms

Insect
Insecta
Hymenoptera
Formicidae
Iridomyrmex glaber
black house ant
Paratrechina vaga
ant
Tapinoma sp.
ant

Non-regulated (non-actionable)

Non-regulated non-quarantine pests

Pest Scientific Name	Common Name

Insecta
Coleoptera
Cicujidae
Cryptamorpha desjardinsii
Desjardin’s flat beetle
Nitidulidae
Carpophilus hemipterus
dried fruit beetle
Homoptera
Coccidae
Coccus hesperidum
brown soft scale
Pseudococcidae
Planococcus citri
citrus mealybug
Lepidoptera
Tineidae
Opogona omoscopa
detritus moth
Thysanoptera
Thripidae
  *Thrips tabaci*  onion thrips

**Mite**

Arachnida
  Acarina
    Acaridae
      *Rhizoglyphus* sp.  acarid mite

**Nematode**

Secernentea
  Tylenchida
    Meloidogynidae
      *Meloidogyne javanica*  Javanese root knot nematode

**Fungus**

Ascomycota
  Hypocreales
    Hypocreaceae
      *Gibberella fujikuroi* (anamorph *Fusarium fujikuroi*)  ear rot

Oomycota
  Pythiales
    Pythiaceae
      *Phytophthora cinnamomi*  wet pod rot, downy mildew
      *Phytophthora nicotianae* var. *parasitica*  wet pod rot, downy mildew
      *Pythium debaryanum*  cottony leak
      *Pythium spinosum*  cottony leak

**Virus**
tomato spotted wilt tospovirus (TSWV)

**Non-regulated non-plant pests/organisms**

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td>Insecta</td>
<td></td>
</tr>
<tr>
<td>Hymenoptera</td>
<td></td>
</tr>
<tr>
<td>Formicidae</td>
<td></td>
</tr>
<tr>
<td><em>Pheidole megacephala</em></td>
<td>big-head ant</td>
</tr>
<tr>
<td><em>Technomyrmex albipes</em></td>
<td>white footed ant</td>
</tr>
</tbody>
</table>

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PUMPKIN
*Cucurbitae pepo* (Note: *C. moschata* is not permitted)

Pumpkins (*C. pepo*) can be exported to New Zealand under the following appendicies.

- Appendix 2 – (fruit fly Area Freedom)

A number of Risk group 2 pests have been listed for pumpkins (*C. pepo*). The Department of Agriculture can certify freedom from these pests based on the following:

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bemisia tabaci</em></td>
<td></td>
</tr>
<tr>
<td>1. The lifecycle of <em>B. tabaci</em> is carried out on the underside of host plant leaves, and there is no association of this pest with the fruit.</td>
<td></td>
</tr>
<tr>
<td>2. If a situation arose where <em>B. tabaci</em> was found to be damaging crops, application of chemicals (registered for use against <em>B. tabaci</em>) such as D-C Tron would provide the necessary control of this pest.</td>
<td></td>
</tr>
<tr>
<td>3. Pre-export inspection of fruit would identify the presence of <em>B. tabaci</em>, and the fruit would be rejected for export to New Zealand.</td>
<td></td>
</tr>
<tr>
<td>4. Historical records show that <em>B. tabaci</em> has never been detected on pumpkin fruit during Department of Agriculture pre-export inspection.</td>
<td></td>
</tr>
<tr>
<td><em>Tetranychus kanzawai</em></td>
<td></td>
</tr>
<tr>
<td>1. Pre-export inspection of fruit would identify the presence of <em>T. kanzawai</em>, and the fruit would be rejected for export to New Zealand.</td>
<td></td>
</tr>
<tr>
<td>2. Historical records show that <em>T. kanzawai</em> has never been detected on pumpkin fruit during Department of Agriculture pre-export inspection.</td>
<td></td>
</tr>
</tbody>
</table>

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

**Regulated Pests (actionable)**

**Quarantine: Risk group 3 pests (actionable) – Mandatory Treatments**

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bactrocera cucumis</em></td>
<td>cucumber fruit fly</td>
</tr>
</tbody>
</table>

**Quarantine: Risk group 2 pests (actionable) – Management Control Systems**

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bemisia tabaci</em></td>
<td>sweet potato whitefly</td>
</tr>
<tr>
<td><em>Tetranychus kanzawai</em></td>
<td>kanzawa mite</td>
</tr>
</tbody>
</table>

**Quarantine: Risk group 1 pests (actionable) – Nil permitted in ≤ 600 unit sample. Treatments (where applicable) allowed as corrective action.**

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
</table>
Amblypelta nitida
Anadevidia peponis
Aphis gossypii [vect.]
Apomecyna spp
Aulacaspis tubercularis
Aulacophora foveicollis
Aulacophora hilaris
Chrysomphalus aonidum
Creontiades dilutus
Diaphania indica
Dysmicoccus brevipes
Empoasca spp
Epilachna boisdvali
Epilachna vigintioctomaculata
Epilachna vigintioctopunctata
Fabriciltis australis
Fabriciltis gonagra
Ferrisia virgata
Graphognathus peregrinus
Halliciellus tibialis
Helicoverpa assulta
Helula undalis
Henosepilachna cucurbitae
Henosepilachna suffusa
Megymenum insulare
Monolepta australis
Myzus persicae [vect.]
Nysius winitor
Planococcus minor
Promecotheca bryanti
Pseudaulacaspis pentagona
Solenopsis geminate
Thrips hawaiiensis
Thrips tabaci [vect.]
Tiracola plagiata
Choanephora cucurbitarum
Fusarium oxysporum f. sp. Melonis
Pythium aphanidermatum
Pythium mamillatum
Pythium myriotylum
Bryobia spp.
Eutetranychus orientalis
Tetranychus desertorum
Tetranychus lombardinii
Tetranychus neocaledonicus
Tyrophagus dimidiatus

fruit-spotting bug
cucumber looper
cotton aphid
vine borers
common mango scale
red pumpkin beetle
pumpkin beetle
Florida red scale
green mirid
melon moth
pineapple mealybug
green leafhoppers
epilachna beetle
leaf feeding coccinellid
28-spot ladybird
squash bug
passionvine bug
striped mealybug
weevil
plant bug
cape gooseberry budworm
Oriental cabbage webworm
cucurbit ladybird
cucurbit shield bug
red-shouldered leaf beetle
green peach aphid
Rutherglen bug
Pacific mealybug
white peach scale
fire ant
Hawaiian flower thrips
onion thrips
banana fruit caterpillar
blight
cotton leak
root rot
rhizome and root rot
bryobiaid mites
pear leaf blister mite
desert spider mite
southern lobed mite
Mexican lobed mite
mushroom mite

Non-regulated pests (non-actionable)
<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Acyrthosiphon kondoi</em></td>
<td>bluegreen lucerne aphid</td>
</tr>
<tr>
<td><em>Acyrthosiphon pisum</em></td>
<td>pea aphid</td>
</tr>
<tr>
<td><em>Aphis craccivora</em></td>
<td>cowpea aphid</td>
</tr>
<tr>
<td><em>Aspidiotus nerii</em></td>
<td>oleander scale</td>
</tr>
<tr>
<td><em>Asynonychus cervinus</em></td>
<td>Fuller’s rose weevil</td>
</tr>
<tr>
<td><em>Aulacorthum solani</em></td>
<td>foxglove aphid</td>
</tr>
<tr>
<td><em>Bourletiella hortensis</em></td>
<td>garden springtail</td>
</tr>
<tr>
<td><em>Chrysodeixis eriosoma</em></td>
<td>green garden looper</td>
</tr>
<tr>
<td><em>Delia platura</em></td>
<td>seedcorn maggot</td>
</tr>
<tr>
<td><em>Forficula auricularia</em></td>
<td>European earwig</td>
</tr>
<tr>
<td><em>Frankliniella occidentalis</em></td>
<td>western flower thrips</td>
</tr>
<tr>
<td><em>Helicoverpa armigera</em></td>
<td>tomato fruit worm</td>
</tr>
<tr>
<td><em>Heliothrips haemorrhoidalis</em></td>
<td>greenhouse thrips</td>
</tr>
<tr>
<td><em>Inopus rubriceps</em></td>
<td>Australian soldier fly</td>
</tr>
<tr>
<td><em>Lipaphis erysimi</em></td>
<td>turnip aphid</td>
</tr>
<tr>
<td><em>Listroderes obliquus</em></td>
<td>vegetable weevil</td>
</tr>
<tr>
<td><em>Macrospilus euphorbiae</em></td>
<td>potato aphid</td>
</tr>
<tr>
<td><em>Nauoactus leucoloma</em></td>
<td>white-fringed weevil</td>
</tr>
<tr>
<td><em>Nezara viridula</em></td>
<td>green vegetable weevil</td>
</tr>
<tr>
<td><em>Parthenothrips dracaenae</em></td>
<td>palm thrips</td>
</tr>
<tr>
<td><em>Planococcus citri</em></td>
<td>citrus mealybug</td>
</tr>
<tr>
<td><em>Pseudococcus viburni</em></td>
<td>obscure mealybug</td>
</tr>
<tr>
<td><em>Rhopalosiphum rufiabdominalis</em></td>
<td>rice root aphid</td>
</tr>
<tr>
<td><em>Scolypopa australis</em></td>
<td>passionvine hopper</td>
</tr>
<tr>
<td><em>Sminthurus viridis</em></td>
<td>lucerne flea</td>
</tr>
<tr>
<td><em>Spodoptera litura</em></td>
<td>cluster caterpillar</td>
</tr>
<tr>
<td><em>Trialeurodes vaporariorum</em></td>
<td>greenhouse whitefly</td>
</tr>
</tbody>
</table>

**Alternaria cucumerina**

*Athelia rolfsii* (anamorph *Sclerotium rolfsii*)

Rolf’s disease

*Botryotinia fuckeliana* (anamorph *Botrytis cinerea*)

grey mould

*Ceratocystis paradoxa* (anamorph *Chalara paradoxa*)

ceratocystis rot

*Colletotrichum coccodes*

anthracnose

*Didymella bryoniae* (anamorph *Phoma cucurbitacearum*)

cucumber stem rot

*Dipodascus geotrichum* (anamorph *Geotrichium candidum*)

sour rot

*Epicoccum nigrum*

black mould

*Erwinia carotovora* subsp. *carotovora*

bacterial soft rot

*Erysiphe cichoracearum* (anamorph *Oidium asteris-punicei*)

powdery mildew

*Fusarium culmorum*

dry rot

*Fusarium oxysporum*

leaf spot

*Fusarium oxysporum* f. *sp. niveum*

fusarium rot

*Fusarium pallidoroseum*

fusarium rot

*Fusarium poae*

fusarium rot storage rot

*Gibberella acuminata* (anamorph *Gibberella avenacea* (anamorph *Fusarium avenaceum*)

fusarium stem canker
Gibberella fujikuroi (anamorph Fusarium fujikuroi) fusarium rot
Gibberella gordonia (anamorph Fusarium heterosporum) mould
Gibberella intricans (anamorph Fusarium equiseti) root and stem dry rot
Gibberella zeae (anamorph Fusarium graminearum) mould
Glomerella lagenaria (anamorph Colletotrichum orbiculare) fruit and stem-end rot
Lasiodiplodia theobromae ashly stem blight
Macrophomina phaseolina pink rot
Phytophthora cryptogea angular leaf spot
Phytophthora drechsleri downy mildew
Pseudomonas syringae pv. lachrymans pythium root and stem rot
Pseudoperonospora cubensis angular leaf spot
Pythium irregulare pythium root and stem rot
Pythium oligandrum angular leaf spot
Pythium ultimum bacterial wilt
Ralstonia solanacearum leak
Rhizopus arrhizus wet rot
cottony rot
Sclerotinia minor wet rot
Sclerotinia sclerotiorum sclerotinia rot
Septoria cucurbitacearum rhizoctonia rot
Thanatephorus cucumeris (anamorph Rhizoctonia solani) pink rot
Trichotheicum roseum verticillium wilt
Verticillium dahliae bacterial leaf spot
Xanthomona campestris pv. cucurbitae bacterial leaf spot

Halotydeus destructor Oriental mite
Panonychus citri citrus red mite
Penthaleus major winter grain mite
Polyphagotarsonemus latus broad mite
two-spotted spider mite
Tetranychus cinnabarinus carmine spider mite
Tetranychus ludesi bean spider mite
Tetranychus urticae two-spotted spider mite
Tyrophagus putrescentiae mould mite
STRAWBERRY
Fragaria spp.

Strawberries can be exported to New Zealand under appendices 2 (fruit fly area freedom) and 3 (methyl bromide fumigation) to the NZ BQA/IHS.

Growers and packhouse do not need to be specifically registered for the New Zealand program unless they are undertaking methyl bromide fumigations on their premises.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

Regulated Pests (actionable)

Quarantine: Risk Group 3 pests (actionable) – Mandatory Treatments

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect</td>
<td></td>
</tr>
<tr>
<td>Diptera</td>
<td></td>
</tr>
<tr>
<td>Tephritidae</td>
<td></td>
</tr>
<tr>
<td>Bactrocera neohumeralis</td>
<td>lesser Queensland fruit fly</td>
</tr>
<tr>
<td>Bactrocera tryoni</td>
<td>Queensland fruit fly</td>
</tr>
<tr>
<td>Ceratitis capitata</td>
<td>Mediterranean fruit fly</td>
</tr>
</tbody>
</table>

Quarantine: Risk group 2 pests (actionable) – Management Control Systems

None

Quarantine: Risk group 1 pests (actionable) – Nil permitted in ≤ 600 unit sample.

Treatments (where applicable) allowed as corrective action.

Insect

Insecta

Coleoptera

Cantharidae

Chauliognathus lugubris         soldier beetle

Chrysomelidae

Haltica corrusca               fles beetle
Haltica pagana                flea beetle

Curculionidae

Orthorhinus aethops           weevil
Otiorhynchus cribicollis      cribrate weevil
Rhadinosomus lacordairei      thin strawberry weevil
Rhinaria perdid

Scarabaeidae
Lepidiota frenchi
Metanastes vulgivagus
Repсимus aeneus
Sericesthis geminata
Sericesthis nigrolineata

strawberry weevil

French’s cane grub
black beetle
white grub
puunose scarab
dusky pasture scarab

Hemiptera
Lygaeidae
Euander lacertosus
Nysius clevelandensis
Nysius vinttor

lygaeid bug
grey cluster bug
Rutherglen bug
capsid

Pyrrhocoridae
Dindymus versicolor

harlequin bug

Homoptera
Pseudococcidae
Chorizococcus arecae
Dysmicoccus brevipes

mealy bug
pineapple mealybug

Lepidoptera
Noctuidae
Helicoverpa punctigera

oriental tobacco budworm

Psychidae
Hyalarcta huebneri

leaf case moth

Tortricidae
Cryptoptila immersana
Epiphyas spp.
Isotenes miserana

ivy leafroller
leafrollers
orange fruitborer

Regulated non-quarantine pests

None

Regulated non plant pests/unwanted organisms

None

Non-regulated Pests (non-actionable)

Non-regulated non-quarantine pests

Pest Scientific Name
Common Name

Insect
Insecta
Coleoptera

Curculionidae
Asynonychus cervinus
Desiantha diversipes
Graphognathus leucoloma
Fuller’s rose weevil
spotted vegetable weevil
whitefringed weevil
Listroderes difficilis  
vegetable weevil

Otiorhynchus rugosostriatus  
rough strawberry weevil

Otiorhynchus sulcatus  
black vine weevil

Phlyctinus callosus  
banded fruit weevil

Scarabaeidae

Heteronychus arator  
black beetle

Homoptera

Aleyrodidae

Trialeurodes vaporariorum  
greenhouse whitefly

Coccidae

Coccus hesperidum  
brown soft scale

Pseudococcidae

Planococcus citri  
citrus mealybug

Lepidoptera

Noctuidae

Helicoverpa armigera  
tomato fruitworm

Spodoptera litura  
cluster caterpillar

Orthoptera

Gryllidae

Teleogryllus commodus  
black field cricket

Thysanopter

Thripidae

Thrips imaginis  
plague thrips

Mite

Arachnida

Acarina

Eriophyidae

Phytonemus pallidus  
banana mite

Tetranychidae

Bryobia rubrioculus  
bryobia mite

Tetranychus lambi  
strawberry spider mite

Tetranychus ludeni  
bean spider mite

Tetranychus urticae  
two-spotted spider mite

Myriapod

Diplopode

Julida

Blaniulidae

Blaniulua guttulatus  
spotted snake millipede

Mollusc

Gastropoda

Styloginmatophora

Helicidae

Helix aspersa  
common garden snail

Limacidae

Deroceras panormitanum  
brown field slug
*Deroceras reticulatum*  
grey garden slug  

*Milax gagates*  
black-keeled slug  

**Non-regulated non plant pests/organisms**

None
TOMATO
*Lycopersicon esculentum*

Tomatoes can be exported to New Zealand under the following appendices:

- Appendix 2 (fruit fly area freedom) to the NZ BQA/IHS
- Appendix 12 (irradiation) to the NZ BQA/IHS

A number of Risk group 2 pests have been listed for tomatoes. The Department of Agriculture can certify freedom from these pests based on the following:

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bemisia tabaci</em></td>
<td>Thrips</td>
</tr>
<tr>
<td><em>Thrips palmi</em></td>
<td>Thrips</td>
</tr>
<tr>
<td><em>Bactrocera musae</em></td>
<td>Fruit Fly</td>
</tr>
</tbody>
</table>

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

**Regulated Pests (actionable)**

**Quarantine: Risk group 3 pests (actionable) - Mandatory Treatments**

Pest Scientific Name | Common Name
---|---
Insect
Insecta
  Diptera
    Tephritidae
      *Bactrocera cucumis*  cucumber fruit fly
      *Bactrocera neohumeralis*  lesser Queensland fruit fly
      *Bactrocera tryoni*  Queensland fruit fly
      *Ceratitis capitata*  Mediterranean fruit fly

**Quarantine:** Risk group 2 pests (actionable) - Management Control Systems

Insect

Insecta
  Diptera
    Tephritidae
      *Bactrocera musae*  banana fruit fly
  Homoptera
    Aleyrodidae
      *Bemisia tabaci* [vect.]  sweet potato whitefly
  Thysanoptera
    Thripidae
      *Thrips palmi* [vect.]  melon thrips

**Quarantine:** Risk group 1 pests (actionable) - Nil permitted in ≤ 600 unit sample. Treatments (where applicable) allowed as corrective action.

Insect

Insecta

  Tenebrionidae
    *Gonocephalum carpentariae*  false wireworm

  Diptera
    Lonchaeidae
      *Lampronchaea brouniana*  metallic-green tomato fly
  Muscidae
    *Atherigona orientalis*  muscid fly
  Tephritidae
    *Dirioxa pornia*  island fruit fly

  Hemiptera
    Aleyrodidae
      *Trialeurodes vaporariorum* [vect.]  greenhouse whitefly
  Cicadellidae
    *Orosius argentatus* [vect.]  common brown leafhopper
    *Orosius orientalis* [vect.]  common brown leafhopper
  Coreidae
    *Fabrictilis australis*  squash bug
  Lygaeidae
    *Nysius vinitor*  Rutherglen bug
  Pentatomidae
    *Plautia affinis*  green stink bug
Pyrrhocoridae  
*Dindymus versicolor*  
harlequin bug

**Rhopalidae**  
*Leptocoris mitellatus*  
leptocoris bug

**Homoptera**  
**Aphididae**  
*Myzus persicae* [vect.]  
green peach aphid

**Cicadellidae**  
*Austroasca viridigrisea*  
vegetable leafhopper

**Pseudococcidae**  
*Ferrisia virgata*  
striped mealybug

*Planococcus minor*  
Pacific mealybug

**Lepidoptera**  
**Noctuidae**  
*Helicoverpa assulta*  
cape gooseberry budworm

*Helicoverpa punctigera*  
oriental tobacco budworm

*Spodoptera exigua*  
beet armyworm

**Thysanoptera**  
**Thripidae**  
*Frankliniella schultzei* [vect.]  
tomato thrips

*Scirtothrips dorsalis* [vect.]  
chilli thrips

**Fungus**

**Oomycota**

**Pythiales**

**Pythiaceae**

*Pythium aphanidermatum*  
cottony leak

**Virus**

capsicum chlorosis virus (CaCV)  
potato spindle tuber viroid (PSTVd)  
tomato torrado virus (ToTV)  
tomato yellow leafcurl virus (TYLCV)

**Phytoplasma**
tomato big bud phytoplasma (TBB)

Regulated non-quarantine pests
None

Regulated non plant pests

Non-regulated pests (non-actionable)

Non-regulated non-quarantine pests

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coleoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coccinellidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Epilachna vigintioctopunctata</em></td>
<td>28-spot ladybird</td>
</tr>
<tr>
<td><strong>Curculionidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Naupactus leucoloma</em></td>
<td>whitefringed weevil</td>
</tr>
<tr>
<td><em>Listroderes difficilis</em></td>
<td>vegetable weevil</td>
</tr>
<tr>
<td><strong>Scarabaeidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Heteronychus arator</em></td>
<td>black beetle</td>
</tr>
<tr>
<td><strong>Hemiptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pentatomidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Nezara viridula</em></td>
<td>green vegetable bug</td>
</tr>
<tr>
<td><strong>Homoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Aleyrodidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bemisia argentifolii</em></td>
<td>poinsettia whitefly</td>
</tr>
<tr>
<td><em>Trialeurodes vaporariorum</em></td>
<td>greenhouse whitefly</td>
</tr>
<tr>
<td><strong>Aphididae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Aphis craccivora</em></td>
<td>cowpea aphid</td>
</tr>
<tr>
<td><em>Aphis gossypii</em></td>
<td>cotton aphid</td>
</tr>
<tr>
<td><em>Aulacorthum solani</em></td>
<td>foxglove aphid</td>
</tr>
<tr>
<td><em>Macrosiphum euphorbiae</em></td>
<td>potato aphid</td>
</tr>
<tr>
<td><strong>Pseudococcidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Pseudococcus viburni</em></td>
<td>obscure mealybug</td>
</tr>
<tr>
<td><strong>Lepidoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Noctuidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Agrotis ipsilon</em></td>
<td>greasy cutworm</td>
</tr>
<tr>
<td><em>Chrysodeixis eriosoma</em></td>
<td>green garden looper</td>
</tr>
<tr>
<td><em>Helicoverpa armigera</em></td>
<td>tomato fruitworm</td>
</tr>
<tr>
<td><em>Spodoptera litura</em></td>
<td>cluster caterpillar</td>
</tr>
<tr>
<td><strong>Thysanoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Thripidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Frankliniella occidentalis</em></td>
<td>western flower thrips</td>
</tr>
</tbody>
</table>
**Thrips tabaci**  
Onion thrips

**Gelechiidae**  
*Phthorimaea operculella*  
Potato tuber moth

**Orthoptera**  
**Gryllidae**  
*Teleogryllus commodus*  
Black field cricket

**Mite**

**Arachnida**  
**Acarina**  
**Eriophyidae**  
*Aculus lycopersici*  
Tomato russet mite

**Tarsonemidae**  
*Polyphagotarsonemus latus*  
Broad mite

**Tetranychidae**  
*Tetranychus cinnabarinus*  
Carmine spider mite
*Tetranychus ludeni*  
Bean spider mite
*Tetranychus urticae*  
Two-spotted spider mite

**Fungus**

**Ascomycota**  
**Dothideales**  
**Mycosphaerellaceae**  
*Mycosphaerella tassiana*  
(Anamorph *Cladosporium herbarum*)  
Black leaf spot

**Hypocreales**  
**Hypocreaceae**  
*Gibberella acuminata*  
(Anamorph *Fusarium acuminatum*)  
Fusarium storage rot
*Nectria haematococca*  
(Anamorph *Fusarium solani*)  
Fusarium fruit rot

**Leotiales**  
**Sclerotiniaceae**  
*Botryotinia fuckeliana*  
(Anamorph *Botrytis cinerea*)  
Grey mould
*Sclerotinia sclerotiorum*  
Cottony rot

**Saccharomycetales**  
**Dipodascaceae**  
*Dipodascus geotrichum*  
(Anamorph *Geotrichum candidum*)  
Sour rot

**Basidiomycota: Basidiomycetes**

**Ceratobasidiales**  
**Ceratobasidiaceae**  
*Thanatephorus cucumeris*  
(Anamorph *Rhizoctonia solani*)  
Rhizoctonia rot

**Stereales**  
**Atheliaceae**  
*Athelia rolfsii*  
(Anamorph *Sclerotium rolfsii*)  
Rolf’s disease

**Mitosporic Fungi (Coelomycetes)**
Sphaeropsidales

Sphaerioidaceae
  *Lasiodiplodia theobromae* fruit and stem-end rot
  *Macrophomina phaseolina* ashy stem blight

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales

Dematiaceae
  *Alternaria tenuissima* alternaria mould
  *Cladosporium oxysporum* cladosporium leaf spot

Moniliaceae
  *Verticillium dahliae* verticillium wilt

Tuberculariales

Tuberculariaceae
  *Fusarium oxysporum* leaf spot

Unknown Hyphomycetes

Unknown Hyphomycetes
  *Trichothecium roseum* pink rot

Zygomycota: Zygomycetes

Mucorales

Mucoraceae
  *Rhizopus stolonifer* rhizopus soft rot

Virus

  Tobacco ringspot nepovirus (TRSV)
  Tomato spotted wilt virus (TSWV)

Non-regulated non plant pests

None
WATERMELON

*Citrullus lanatus*

Watermelons can be exported to New Zealand under the following appendices:

- Appendix 2 (fruit fly area freedom)
- Appendix 3 (methyl bromide fumigation) and Appendix 10 (field control programme)
- Appendix 11 (winter window) and Appendix 10 (field control programme)

A number of Risk group 2 pests have been listed for watermelons. The Department of Agriculture can certify freedom from these pests based on the following:

**Bemisia tabaci**

1. The lifecycle of *B. tabaci* is carried out on the underside of host plant leaves, and there is no association of this pest with the fruit.
2. If a situation arose where *B. tabaci* was found to be damaging crops, application of chemicals (registered for use against *B. tabaci*) such as D-C Tron would provide the necessary control of this pest.
3. If by chance *B. tabaci* were present on harvested *Citrullus lanatus* fruit as a hitch-hiker, the pre-export methyl bromide fumigation treatment (appendix 3 to the NZ BQA) would kill the animal.
4. Pre-export inspection of fruit will identify the presence of *B. tabaci*, and the fruit would be rejected for export to New Zealand.
5. Historical records show that *B. tabaci* has never been detected on melon fruit during Department of Agriculture pre-export inspection.

Note: item 3 above does not apply to melon fruit exported to New Zealand under appendices 2 (fruit fly area freedom) or 11 (winter window) to the NZ BQA. It is felt however, that items 1, 2, 4, and 5 provide an appropriate level of confidence in certifying freedom from this pest.

**Thrips palmi**

1. If *T. palmi* were present on harvested *Citrullus lanatus* fruit, the pre-export methyl bromide fumigation treatment (appendix 3 to the NZ BQA) would kill the animal.
2. Pre-export inspection of fruit will identify the presence of *T. palmi*, and the fruit would be rejected for export to New Zealand.
3. Historical records show that *T. palmi* has never been detected on melon fruit during Department of Agriculture pre-export inspection.

Note: item 1 above does not apply to melon fruit exported to New Zealand under appendices 2 (fruit fly area freedom) and 11 (winter window) to the NZ BQA. It is felt however, that items 2, and 3 provide an appropriate level of confidence in certifying freedom from this pest.

**Tetranychus kanzawai**

1. Dimethoate is registered for in-field use against *Tetranychus* spp. Melons exported to New Zealand under appendices 3 and 10 to the NZ BQA are required to undergo an in-field spray program (using dimethoate) for the control of fruit fly. This program is also effective against *Tetranychus* spp.
2. Melons exported to New Zealand under appendix 3 to the NZ BQA are required to undergo a pre-export methyl bromide fumigation treatment. This treatment will kill *T. kanzawai*.
3. Pre-export inspection of fruit will identify the presence of *T. kanzawai*, and the fruit would be rejected for export to New Zealand.
4. Historical records show that *T. kanzawai* has never been detected on melon fruit during Department of Agriculture pre-export inspection.
During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

Regulated pests (actionable)

Quarantine: Risk group 3 pests (actionable) - Mandatory Treatments

<table>
<thead>
<tr>
<th>Scientific Pest Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Diptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Tephritidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bactrocera cucumis</em></td>
<td>cucumber fruit fly</td>
</tr>
</tbody>
</table>

Quarantine: Risk group 2 pests (actionable) - Management Control Systems

<table>
<thead>
<tr>
<th>Scientific Pest Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Homoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Aleyrodidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Bemisia tabaci</em></td>
<td>sweet potato whitefly</td>
</tr>
<tr>
<td><strong>Thysanoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Thripidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Thrips palmi</em></td>
<td>melon thrips</td>
</tr>
</tbody>
</table>

**Mite**

<table>
<thead>
<tr>
<th>Scientific Pest Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arachnida</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Acarina</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Tetranychidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Tetranychus kanzawai</em></td>
<td>kanzawa mite</td>
</tr>
</tbody>
</table>

Quarantine: Risk group 1 pests (actionable) - Nil permitted in ≤ 600 unit sample. Treatments (where applicable) allowed as corrective action.

<table>
<thead>
<tr>
<th>Scientific Pest Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insect</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Insecta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coleoptera</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Cerambycidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Apomecyna spp.</em></td>
<td>vine borers</td>
</tr>
<tr>
<td><strong>Chrysomelidae</strong></td>
<td></td>
</tr>
<tr>
<td><em>Aulacophora foveicollis</em></td>
<td>red pumpkin beetle</td>
</tr>
<tr>
<td><em>Aulacophora hilaris</em></td>
<td>pumpkin beetle</td>
</tr>
<tr>
<td><em>Chaetocnema spp.</em></td>
<td>flea beetles</td>
</tr>
<tr>
<td><em>Monolepta australis</em></td>
<td>red-shouldered leaf beetle</td>
</tr>
<tr>
<td><strong>Coccinellidae</strong></td>
<td></td>
</tr>
</tbody>
</table>
Epilachna boisduvali       epilachna beetle
Epilachna cucurbitae       epilachna beetle
Epilachna vigintioctomaculata    leaf feeding coccinellid
Henosepilachna suffusa

Hemiptera
Coreidae
Amblypelta nitida       fruit-spotting bug
Fabriciitis australis    squash bug
Fabriciitis gonagra      passionvine bug
Dinoridae
Megynenum insulare       cucurbit shield bug
Lygaeidae
Nysius vinitor          Rutherglen bug
Miridae
Creontiades dilutus      green mirid
Halticiellus tibialis    plant bug
Pentatomidae
Kapunda troughtoni       variable shield bug

Homoptera
Aleyrodidae
Trialeurodes spp.      whiteflies
(except T. vaporariorum)
Cicadellidae
Empoasca spp.           green leafhoppers
Diaspididae
Chrysomphalus aonidum    Florida red scale
Pseudococcidae
Ferrisia virgata         striped mealybug
Planococcus minor        Pacific mealybug

Lepidoptera
Noctuidae
Agrotis spp.             cutworms
(except A. ipsilon)
Anadevidia peponis       cucumber looper
Eudocima fullonia        fruit-piercing moth
Helicoverpa assulta      cape gooseberry budworm
Heliothis spp.           noctuids
Spodoptera exigua        beet armyworm
Pyralidae
Diaphania indica         melon moth
Hellula undalis          oriental cabbage webworm
Thysanoptera
Thripidae
Thrips hawaiensis        Hawaiian flower thrips

Mite

Arachnida
Acarina
Acaridae
Tyrophagus dimidiatus    mushroom mite
Tetranychidae
*Eutetranychus orientalis*  pear leaf blister mite  
*Tetranychus desertorum*  desert spider mite  
*Tetranychus lombardinii*  southern lobed mite  
*Tetranychus neocaledonicus*  Mexican spider mite

**Fungus**

Mitosporic Fungi (Coelomycetes)

Sphaeropsidales

*Sphaerioidaceae*

Ascochyta spp.  
Phomopsis cucurbitae

Oomycota

Pythiales

*Pythiaceae*

*Pythium* spp.  pythium rot

**Bacterium**

Enterobacteriaceae

*Erwinia tracheiphila* bacterial wilt

Pseudomonadaceae

*Acidovorax avenae subsp. citrulli* bacterial rot

**Regulated non-quarantine pests**

None

**Regulated non plant pests**

**Insect**

**Insecta**

Hymenoptera

Formicidae

*Solenopsis* geminata  fire ant

**Non-regulated pests (non-actionable)**

**Non-regulated non-quarantine pests**

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
</table>

**Insect**

**Insecta**

Coleoptera

Curculionidae

*Asynonychus cervinus*  Fuller's rose weevil  
*Listroderes obliquus*  vegetable weevil  
*Naupactus leucoleoma*  whitefringed weevil
Collembola
Smintthuridae
Bourletiella hortensis garden springtail
Smintthus viridis lucerne flea

Dermaptera
Forficulidae
Forficula auricularia European earwig

Diptera
Anthomyiidae
Delia platura seedcorn maggot

Hemiptera
Pentatomidae
Nezara viridula green vegetable bug

Homoptera
Aleyrodidae
Bemisia argentifolii poinsettia whitefly
Trialeurodes vaporariorum greenhouse whitefly

Aphididae
Aphis craccivora cowpea aphid
Aphis gossypii cotton aphid
Aulacorthum solani foxglove aphid
Lipaphis erysimi turnip aphid
Macrosiphum euphorbiae potato aphid
Myzus persicae green peach aphid
Rhopalosipum maidis corn leaf aphid
Rhopalosipum ruflatombinalis rice root aphid
Toxoptera aurantii black citrus aphid

Lepidoptera
Noctuidae
Chrysodeixis eriosoma green garden looper
Helicoverpa armigera tomato fruitworm
Spodoptera litura cluster caterpillar

Thysanoptera
Thripidae
Frankliniella occidentalis western flower thrips
Thrips tabaci onion thrips

Mite

Arachnida
Acarina
Acaridae
Tyrophagus putrescentiae mould mite

Eupodidae

Halotydeus destructor oriental mite
Penthaeleus major winter grain mite

Tarsonemidae
Polyphagotarsonemus latus broad mite

Tetranychidae
Panonychus citri citrus red mite
Tetranychus cinnabarinus carmine spider mite
Tetranychus ludeni  bean spider mite
Tetranychus urticae  twospotted spider mite

Fungus

Ascomycota

Dothideales

Pleosporaceae

Leptosphaerulina trifolii  seed rot

Unknown Dothideales

Didymella bryoniae

(anamorph Phoma cucurbitacearum)  cucumber stem rot

Erysiphales

Erysiphe cichoracearum

(anamorph Oidium asteris-punicei)  powdery mildew

Hypocreales

Hypocreaceae

Nectria haematococca

(anamorph Fusarium solani)  fusarium fruit rot

Leotiales

Sclerotiniaceae

Botryotinia fuckeliana

(anamorph Botrytis cinerea)  grey mould

Sclerotinia sclerotiorum  cottony rot

Phyllachorales

Phyllachoraceae

Glomerella cingulata (anamorph Colletotrichum gloeosporioides)  bitter rot

Glomerella lagenaria (anamorph Colletotrichum orbiculare)

Basidiomycota: Basidiomycetes

Ceratobasidiales

Ceratobasidiaceae

Thanatephorus cucumeris

(anamorph Rhizoctonia solani)  rhizoctonia rot

Stereales

Atheliaceae

Athelia rolfsii

(anamorph Sclerotium rolfsii)  Rolf’s disease

Mitosporic Fungi (Coelomycetes)

Sphaeropsidales

Sphaerioidaceae

Phoma exigua  phoma rot

Septoria cucurbitacearum

Mitosporic Fungi (Hyphomycetes)

Hyphomycetales

Dematiaceae

Alternaria cucumerina

Moniliaceae

Verticillium dahliae  verticillium wilt
Tuberculiales
   Tuberculariaceae
       Fusarium culmorum        dry rot
       Fusarium oxysporum f. sp. niveum
       Fusarium pallidoroseum
       Fusarium solani f. sp. cucurbitae

Unknown Hyphomycetes
   Unknown Hyphomycetes
       Trichotheceum roseum        pink rot

Oomycota
   Peronosporales
       Peronosporaceae
           Pseudoperonospora cubensis        downy mildew

Bacterium

   Pseudomonadaceae
       Xanthomonas campestris pv. cucurbitae        bacterial leaf spot

Non-regulated non plant pests

None
ZUCCHINI & SCALLOPINI

Cucurbita pepo

Zucchinis can be exported to New Zealand under the following appendices:

- Appendix 2 (fruit fly area freedom)
- Appendix 11 (winter window) and Appendix 10 (field control programme).

Scallopinis can be exported to New Zealand under the following appendices:

- Appendix 2 (fruit fly area freedom)
- Appendix 11 (winter window) and Appendix 10 (field control programme).

A number of Risk group 2 pests have been listed for zucchinis and scallopinis. The Department of Agriculture can certify freedom from these pests based on the following:

**Bemisia tabaci**

1. The lifecycle of *B. tabaci* is carried out on the underside of host plant leaves, and there is no association of this pest with the fruit.
2. If a situation arise where *B. tabaci* was found to be damaging crops, applications of chemicals (registered for use against *B. tabaci*) such as D-C Tron would provide the necessary control of this pest.
3. Pre-export inspection of fruit would identify the presence of *B. tabaci*, and the fruit would be rejected for export to New Zealand.
4. Historical records show that *B. tabaci* has never been detected on zucchini fruit during Department of Agriculture pre-export inspection.

**Tetranychus kanzawai**

1. Monitoring, and where applicable, application of chemicals (registered for use against *Tetranychus* spp.) would provide the necessary control of this pest.
2. Pre-export inspection of fruit would identify the presence of *T. kanzawai*, and the fruit would be rejected for export to New Zealand.
3. Historical records show that *T. kanzawai* has never been detected on zucchini fruit during Department of Agriculture pre-export inspection.

**Thrips palmi (zucchini only)**

1. Monitoring, and where applicable, application of chemicals (registered for use against *Thrips palmi*) would provide the necessary control of this pest.
2. Pre-export inspection of fruit would identify the presence of *Thrips palmi*, and the fruit would be rejected for export to New Zealand, or treated with methyl bromide.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.
### Regulated Quarantine Pests (actionable)

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amblypelta nitida</td>
<td>fruit-spotting bug</td>
</tr>
<tr>
<td>Anadevidia peponis</td>
<td>cucumber looper</td>
</tr>
<tr>
<td>Apomecyna spp</td>
<td>vine borers</td>
</tr>
<tr>
<td>Aulacaspis tubercularis</td>
<td>common mango scale</td>
</tr>
<tr>
<td>Aulacophora foveicollis</td>
<td>red pumpkin beetle</td>
</tr>
<tr>
<td>Aulacophora hilaris</td>
<td>pumpkin beetle</td>
</tr>
<tr>
<td>Bactrocera cucumis</td>
<td>cucumber fruit fly #</td>
</tr>
<tr>
<td>Bemisia tabaci</td>
<td>sweet potato whitefly #</td>
</tr>
<tr>
<td>Ceratitis capitata</td>
<td>Mediterranean fruit fly #</td>
</tr>
<tr>
<td>Chrysomphalus aonidum</td>
<td>Florida red scale</td>
</tr>
<tr>
<td>Creontiades dilutus</td>
<td>green mirid</td>
</tr>
<tr>
<td>Diaphania indica</td>
<td>melon moth</td>
</tr>
<tr>
<td>Dysmicoccus brevipes</td>
<td>pineapple mealybug</td>
</tr>
<tr>
<td>Empoasca spp</td>
<td>green leafhoppers</td>
</tr>
<tr>
<td>Epilachna boisduali</td>
<td>epilachna beetle</td>
</tr>
<tr>
<td>Epilachna vigintioctomaculata</td>
<td>leaf feeding</td>
</tr>
<tr>
<td>coccinellid</td>
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</tr>
<tr>
<td>Fabricitilis australis</td>
<td>squash bug</td>
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<tr>
<td>Fabricitilis gonagra</td>
<td>passionvine bug</td>
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<tr>
<td>Ferrisia virgata</td>
<td>striped mealybug</td>
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<tr>
<td>Graphognathus peregrinus</td>
<td>weevil</td>
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<tr>
<td>Halticiellus tibialis</td>
<td>plant bug</td>
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<tr>
<td>Helicoverpa assulta</td>
<td>cape gooseberry budworm</td>
</tr>
<tr>
<td>Hellula undalis</td>
<td>Oriental cabbage webworm</td>
</tr>
<tr>
<td>Henosepilachna cucurbitae</td>
<td>cucurbit ladybird</td>
</tr>
<tr>
<td>Henosepilachna suffusa</td>
<td></td>
</tr>
<tr>
<td>Megymenum insulare</td>
<td>cucurbit shield bug</td>
</tr>
<tr>
<td>Monolepta australis</td>
<td>red-shouldered leaf beetle</td>
</tr>
<tr>
<td>Myzus persicae [vect.]</td>
<td>green peach aphid</td>
</tr>
<tr>
<td>Nysius vinitor</td>
<td>Rutherglen</td>
</tr>
<tr>
<td>bug</td>
<td></td>
</tr>
<tr>
<td>Planococcus minor</td>
<td>Pacific mealybug</td>
</tr>
<tr>
<td>Promeotheca bryanti</td>
<td></td>
</tr>
<tr>
<td>Pseudaulacaspis pentagona</td>
<td>white peach scale</td>
</tr>
<tr>
<td>Solenopsis geminate</td>
<td>fire ant</td>
</tr>
<tr>
<td>Thrips hawaiiensis</td>
<td>Hawaiian flower thrips</td>
</tr>
<tr>
<td>Thrips palmi</td>
<td>melon thrips</td>
</tr>
<tr>
<td>Tiracola plagiata</td>
<td>banana fruit caterpillar</td>
</tr>
<tr>
<td>Choanephora cucurbitarum</td>
<td>blight</td>
</tr>
<tr>
<td>Fusarium oxysporum f. sp. Melonis</td>
<td></td>
</tr>
<tr>
<td>Pythium aphanidermatum</td>
<td>cotton leak</td>
</tr>
<tr>
<td>Pythium mamillatum</td>
<td>root rot</td>
</tr>
<tr>
<td>Pythium myriotylum</td>
<td>rhizome and root rot</td>
</tr>
<tr>
<td>Bryobia spp</td>
<td>bryobiaid mites</td>
</tr>
<tr>
<td>Eutetranychus orientalis</td>
<td>pear leaf blister mite</td>
</tr>
<tr>
<td>Tetranychus desertorum</td>
<td>desert spider mite</td>
</tr>
<tr>
<td><strong>Tetranychus kanzawai</strong></td>
<td><strong>kanzawa mite #</strong></td>
</tr>
</tbody>
</table>
Non-regulated pests (non-actionable)

<table>
<thead>
<tr>
<th>Pest Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acyrthosiphon kondoi</td>
<td>bluegreen lucerne aphid</td>
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<tr>
<td>Acyrthosiphon pisum</td>
<td>pea aphid</td>
</tr>
<tr>
<td>Aphis craccivora</td>
<td>cowpea aphid</td>
</tr>
<tr>
<td>Aphis gossypii</td>
<td>cotton aphid</td>
</tr>
<tr>
<td>Aspidiotus nerii</td>
<td>oleander scale</td>
</tr>
<tr>
<td>Asynonychus cervinus</td>
<td>Fuller’s rose weevil</td>
</tr>
<tr>
<td>Aulacorthum solani</td>
<td>foxglove aphid</td>
</tr>
<tr>
<td>Bourletiella hortensis</td>
<td>garden springtail</td>
</tr>
<tr>
<td>Chrysodeixis eriosoma</td>
<td>green garden looper</td>
</tr>
<tr>
<td>Delia platura</td>
<td>seedcorn maggot</td>
</tr>
<tr>
<td>Epilachna vigintioctopunctata</td>
<td>28-spot ladybird</td>
</tr>
<tr>
<td>Forficula auricularia</td>
<td>European earwig</td>
</tr>
<tr>
<td>Frankliniella occidentalis</td>
<td>western flower thrips</td>
</tr>
<tr>
<td>Helicoverpa armigera</td>
<td>tomato fruit worm</td>
</tr>
<tr>
<td>Heliothrips haemorrhoidalis</td>
<td>greenhouse thrips</td>
</tr>
<tr>
<td>Inopus rubriceps</td>
<td>Australian soldier fly</td>
</tr>
<tr>
<td>Lipaphis erysimi</td>
<td>turnip aphid</td>
</tr>
<tr>
<td>Listroderes obliquus</td>
<td>vegetable weevil</td>
</tr>
<tr>
<td>Macrosiphum euphorbiae</td>
<td>potato aphid</td>
</tr>
<tr>
<td>Nauoactus leucoloma</td>
<td>whitefringed weevil</td>
</tr>
<tr>
<td>Nezara viridula</td>
<td>green vegetable bug</td>
</tr>
<tr>
<td>Parthenothrips dracaenae</td>
<td>palm thrips</td>
</tr>
<tr>
<td>Planococcus citri</td>
<td>citrus mealybug</td>
</tr>
<tr>
<td>Pseudococcus viburni</td>
<td>obscure mealybug</td>
</tr>
<tr>
<td>Rhopalosiphum rufiabdominalis</td>
<td>rice root aphid</td>
</tr>
<tr>
<td>Scolytoppa australis</td>
<td>passionvine hopper</td>
</tr>
<tr>
<td>Sminthurus viridis</td>
<td>lucerne flea</td>
</tr>
<tr>
<td>Spodoptera litura</td>
<td>cluster caterpillar</td>
</tr>
<tr>
<td>Trialeurodes vaporariorum</td>
<td>greenhouse whitefly</td>
</tr>
<tr>
<td>Thrips tabaci</td>
<td>onion thrips</td>
</tr>
<tr>
<td>Alternaria cucumerina</td>
<td>Rolf’s disease</td>
</tr>
<tr>
<td>Athelia rolfsii (anamorph Sclerotium rolfsii)</td>
<td>grey mould</td>
</tr>
<tr>
<td>Botryotinia fuckeliana (anamorph Botrytis cinerea)</td>
<td>ceratocystis rot</td>
</tr>
<tr>
<td>Ceratocystis paradoxa (anamorph Chalara paradoxa)</td>
<td>anthracnose</td>
</tr>
<tr>
<td>Colletotrichum coccodes</td>
<td>cucumber stem rot</td>
</tr>
<tr>
<td>Didymella bryoniae (anamorph</td>
<td>sour rot</td>
</tr>
<tr>
<td>Phoma cucurbitacearum</td>
<td>black mould</td>
</tr>
<tr>
<td>Dipodascus geotrichum (anamorph</td>
<td>bacterial soft rot</td>
</tr>
<tr>
<td>Geotrichum candidum</td>
<td></td>
</tr>
<tr>
<td>Epicoccum nigrum</td>
<td></td>
</tr>
<tr>
<td>Erwinia carotovora subsp. carotovora</td>
<td></td>
</tr>
</tbody>
</table>
Erysiphe cichoracearum (anamorph Oidium asteris-punicei) powdery mildew
Fusarium culmorum dry rot
Fusarium oxysporum leaf spot
Fusarium oxysporum f. sp. niveum
Fusarium pallidoroseum fusarium rot
Fusarium poae fusarium rot
Fusarium solani f. sp. Cucurbitae fusarium rot
Gibberella acuminata (anamorph Fusarium acuminatum) fusarium storage rot
Gibberella avenacea (anamorph Fusarium avenaceum) fusarium stem canker
Gibberella fujikuroi (anamorph Fusarium fujikuroi) fusarium rot
Gibberella gordonia (anamorph Fusarium heterosporum) mould
Gibberella intricans (anamorph Fusarium equiseti) root and stem dry rot
Gibberella zeae (anamorph Fusarium graminearum) mould
Glomerella lagenaria (anamorph Colletotrichum orbiculare) fruit and stem-end rot
Lasiodiplodia theobromae ashy stem blight
Macrophomina phaseolina pink rot
Phytophthora cryptogea angular leaf spot
Phytophthora drechsleri downy mildew
Pseudomonas syringae pv. lachrymans pythium root and stem rot
Pythium irregulare
Pythium oligandrum leak
Pythium ultimum bacterial wilt
Ralstonia solanacearum wet rot
Rhizopus arrhizus sclerotinia rot
Sclerotinia minor cottony rot
Sclerotinia sclerotiorum rhizoctonia rot
Septoria cucurbitacearum
Thanatephorus cucumeris (anamorph Rhizoctonia solani) pink rot
Trichothecium roseum verticillium wilt
Verticillium dahliae bacterial leaf spot
Xanthomonas campestris pv. cucurbitae

Halotydeus destructor Oriental mite
Panonychus citri citrus red mite
Pentaleus major winter grain mite
Polyphagotarsonemus latus broad mite
Tetranychus cinnabarinus carmine spider mite
Tetranychus ludeni bean spider mite
Tetranychus urticae two-spotted spider mite
Tyrophagus putrescentiae mould mite

Tobacco ringspot nepovirus (TRSV)

# Denotes high impact pest
**2.1 APPLICATION FOR GROWER REGISTRATION**

**APPLICATION FOR GROWER REGISTRATION AUSTRALIA - NEW ZEALAND**

Please post or fax this form to your local regional Department of Agriculture office

<table>
<thead>
<tr>
<th>NAME OF GROWER/S</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GROWER NUMBER (if previously registered)</td>
<td></td>
</tr>
<tr>
<td>EMAIL ADDRESS</td>
<td></td>
</tr>
<tr>
<td>POSTAL OR BUSINESS ADDRESS</td>
<td></td>
</tr>
<tr>
<td>POSTAL OR BUSINESS ADDRESS</td>
<td></td>
</tr>
<tr>
<td>POST CODE</td>
<td></td>
</tr>
</tbody>
</table>

| PROPERTY ADDRESS |  |
| POST CODE |  |

| REAL PROPERTY DESCRIPTION | (of area under planting – please attach detailed maps) |

**DECLARATION**

I/We, ........................................................................................................................................ hereby apply for registration to produce .................................................................................(insert one crop group only) for export to New Zealand as required under the Bilateral Quarantine Arrangement made between the Ministry for Primary Industries, New Zealand and the Australian Government Department of Agriculture.

I have read the Systems Operation Manual and agree to be bound by the conditions and restrictions contained therein as they apply to growers.

I acknowledge that failure to comply with the aforementioned conditions and restrictions may lead to suspension or cancellation of said registration.

<table>
<thead>
<tr>
<th>SIGNATURE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WITNESS</td>
<td>DATE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CROP GROUPS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Avocados</td>
<td>Zucchini</td>
</tr>
<tr>
<td>Citrus</td>
<td>Tomato</td>
</tr>
<tr>
<td>Scallopini</td>
<td>Watermelon</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>Strawberries</td>
</tr>
<tr>
<td>Cucumber</td>
<td>Scaloppini</td>
</tr>
</tbody>
</table>

Department of Agriculture Inspector: ...............................................................

Signature: ...............................................................  

Regional Office: ...............................................................  

Date: ...............................................................  

[Authorised stamp]
Please post or fax this form to your local regional Department of Agriculture office

NAME

DEPARTMENT OF AGRICULTURE EXPORT ESTABLISHMENT NUMBER (if applicable)

EMAIL ADDRESS

POSTAL ADDRESS

PREMISES ADDRESS

POST CODE

DECLARATION

I/We, ........................................................................................... hereby apply for registration as a packer / freight forwarder / load out facility / delegated export inspector for commodities…………………………………………………………………………………………………… for export to New Zealand as required under the Bilateral Quarantine Arrangement made between the Ministry for Primary Industries, New Zealand and the Australian Government Department of Agriculture.

The following persons are hereby nominated as those responsible for upholding requirements within the SOM.

Name

Responsibility (circle as appropriate)

Product Integrity / Load Out / Export Inspection

Product Integrity / Load Out / Export Inspection

Product Integrity / Load Out / Export Inspection

Product Integrity / Load Out / Export Inspection

I have read the Systems Operation Manual as amended and agree to be bound by the conditions and restrictions contained therein as they apply to packhouses / freight forwarders / load out facilities / delegated export inspectors. I acknowledge that failure to comply with the aforementioned conditions and restrictions may lead to suspension or cancellation of said registration.

SIGNATURE

DATE

WITNESS

DATE

Department of Agriculture Inspector: ........................................................

Signature: ........................................................

Regional Office: ........................................................

Date: ........................................................
# APPLICATION FOR TREATMENT CENTRE REGISTRATION

**APPLICATION FOR TREATMENT CENTRE REGISTRATION AUSTRALIA - NEW**

Please post or fax this form to your local regional Department of Agriculture office

<table>
<thead>
<tr>
<th>NAME OF TREATMENT CENTRE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEPARTMENT OF AGRICULTURE EXPORT ESTABLISHMENT NUMBER (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EMAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
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<table>
<thead>
<tr>
<th>POSTAL ADDRESS</th>
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<table>
<thead>
<tr>
<th>POST CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>PREMISES ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POST CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**DECLARATION**

I/We, ........................................................................................................................................................................ hereby apply for registration as a treatment centre as required under the Bilateral Quarantine Arrangement made between the Ministry for Primary Industries, New Zealand and the Australian Government Department of Agriculture.

I have read the Systems Operation Manual and agree to be bound by the conditions and restrictions contained therein as they apply to treatment centres.

I acknowledge that failure to comply with the aforementioned conditions and restrictions may lead to suspension or cancellation of said registration.

<table>
<thead>
<tr>
<th>SIGNATURE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WITNESS</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment Type (please specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Bromide Fumigation</td>
</tr>
<tr>
<td>Dimethoate</td>
</tr>
<tr>
<td>Cold Storage</td>
</tr>
<tr>
<td>Irradiation</td>
</tr>
</tbody>
</table>

Department of Agriculture Inspector: .................................................................

Signature: .....................................................

Regional Office: .............................................

Date: ............................................................
2.4 APPLICATION TO PERFORM FIELD MONITORING ADVISORY SERVICES
AUSTRALIA - NEW ZEALAND BILATERAL QUARANTINE ARRANGEMENT

I/We (Name) ............................................................ for Season/Year ......................
Address ........................................................................
........................................................................
........................................................................
hereby make application for approval under the NZ BQA to perform field monitoring advisory services
to growers registered by the Department of Agriculture for the following commodities:
........................................................................
........................................................................
........................................................................
........................................................................
Please attach list separately if insufficient room above.

Please detail briefly your training and experience that enables you to give grower consultancy for the
control of pests, disease and weed seeds.
........................................................................
........................................................................
........................................................................
........................................................................
I/We have copies of the NZ BQA Systems Operation Manual as amended and have the ability to
recognise and identify the regulated pest and weed seeds of concern to New Zealand.

I/We agree to recommend to growers only those sprays/chemicals that are listed in the Recommended
Spray Charts issued by local Department authorities.

I/We agree to issue to growers records of findings of all field visits together with recommended
corrective action when necessary. I/We further agree to maintain individual grower/commodity records
for all growers to which I/we provide field monitoring services for. I/We agree to make all records
pertaining to NZ BQA registered growers available to the Department of Agriculture/MPI for auditing
purposes.

I/We agree to notify the Department of Agriculture immediately should any NZ BQA registered grower
that we are performing advisory services for, fail to maintain their property in a hygienic manner as
required under the terms and conditions of the NZ BQA and the instructions contained in the Systems
Operation Manual for NZ BQA.

Signature ............................................................... Date ........................................

Printed Name ............................................................ Date ........................................

Department of Agriculture Inspector: .................................................................

Signature: .................................................................

Regional Office: ............................................................

Date: .................................................................
Name of Applicant (Exporter) ........................................................
Address ........................................................
Phone Number ........................................................
Contact Persons ........................................................
[Actively involved in NZ Program] ........................................................
Title ........................................................

I/We have read and thoroughly understand the exporters' responsibility as contained in Australian - New Zealand Bilateral Quarantine Arrangement and the NZ BQA Systems Operation Manual (as amended).

I/We agree to abide by the requirements contained in the Arrangement at all times.

Exporters do not need to fill out exporter delegation functions immediately however, it is imperative that when exporters are to delegate any duty, the Department of Agriculture must be advised immediately and certainly before any duties are so performed. A facsimile transmission covering the points listed below will suffice as proper notification.

Export Inspection

The Company will be undertaking exporter inspection requirements under the NZ BQA and the Systems Operation Manual. This Company undertakes to use appropriately trained Quality Control persons who are aware of the regulated quarantine and phytosanitary quarantine pests that are of a concern to New Zealand.

The Company when undertaking Quality Control inspections for NZ BQA commodities will provide properly identified inspection records which will be signed by the person who undertakes the inspection.

Exporter Delegation of Inspection

The following parties and persons are hereby delegated by this Company and with agreement of those hereby nominated to perform export inspection duties for and on behalf of this Company.

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Commodity</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
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<td>...</td>
</tr>
</tbody>
</table>

Page 2 of 2
**Treatment Supervision Authority**

The following parties and persons are hereby delegated by this Company and with the agreement of those hereby nominated to perform export treatments as required by the NZ BQA for and on behalf of this Company.

<table>
<thead>
<tr>
<th>Company</th>
<th>Commodity</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>..........</td>
<td>..........</td>
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<td>...........................................................</td>
</tr>
</tbody>
</table>

**Loading Supervisory Authority**

The following parties and persons are hereby delegated by this Company and with the agreement of those hereby nominated to perform load out supervision of NZ BQA commodities as is required by the NZ BQA and the contents of this Manual.

<table>
<thead>
<tr>
<th>Company</th>
<th>Commodity</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>..........</td>
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</tr>
</tbody>
</table>

We believe the above nominated persons have the necessary attributes to inspect produce for export to New Zealand on our behalf and have full knowledge of details that the NZ BQA and the Systems Operation Manual as amended required for inspection purposes.

Name of Applicant: ...........................................  
Signature: ...........................................  
Date: ...........................................

Department of Agriculture Inspector: ...........................................  
Signature: ...........................................  
Regional Office: ...........................................  
Date: ...........................................
## 2.6 INSPECTION RECORD

### INSPECTION RECORD - NEW ZEALAND

<table>
<thead>
<tr>
<th>Date</th>
<th>Trade Description</th>
<th>Commodity</th>
<th>Commodity</th>
<th>No of Cartons</th>
<th>Registered Grower No.</th>
<th>Registered Grower No.</th>
<th>Registered Packing Establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ex 28/RFP Number/s: .................................................................

Australian Origin .................................................................

Ex 186 Number/s .................................................................

Sample Size 450 - 600 - 950 - 1250

Exporters .................................................................

Exporter Inspection completed by:.................................

(a) Exporter

(b) ED (name)

Inspector Name .................................................................

(Block Letters) Inspected by: .................................................................

Grower Line .................................................................

Inspector's Signature .................................................................

Consignment Line .................................................................

**NOTE:**

<table>
<thead>
<tr>
<th>Carton Number</th>
<th>Number of Units</th>
<th>Total Units</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RG3</td>
<td>RG2</td>
</tr>
<tr>
<td>1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5</td>
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<tr>
<td>Total</td>
<td></td>
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</tr>
</tbody>
</table>

Passed ☐ Failed ☐ Ex 161 Number/s (if failed).................................

**Please note, this is a template only: packhouse/exporters are permitted to formulate their own copies of this template, provided all of the above information is contained. This form will be checked and approved at audit.**

Australia – New Zealand Bilateral Quarantine Arrangement

Systems Operation Manual (Amendment 6E – April 2014)
### METHYL BROMIDE FUMIGATION RECORD - NEW ZEALAND

<table>
<thead>
<tr>
<th>Date</th>
<th>Name of Fumigator</th>
<th>Licensed Fumigator Number</th>
<th>Registered Establishment Number</th>
<th>Transfer Certificate (Ex 186) Number</th>
<th>Overall Temperature Range</th>
<th>Fumigation Rate</th>
<th>Fumigation Chamber Volume</th>
<th>Total Load as % of Chamber Volume</th>
<th>Time of Vaporisation</th>
<th>Time of Vent</th>
</tr>
</thead>
</table>

### Grower Number | Number of Cartons/Commodity | Temperatures Taken *
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
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<td></td>
</tr>
</tbody>
</table>

**REMARKS:**

* of product at time of entry to fumigation

The thermometer used for temperature of product was calibrated on the ...............(Date)

Signature ................................................................. Date ..........................
DECLARATION

On ...........................................(date) I, ................................................................. Department of Health Licensed Fumigator Number.................................................................
of ................................................................................................................. fumigated the product described on EX 186 Number ...............................................................with methyl bromide in accordance with treatment specifications outlined in the agreement between the Department of Agriculture and the New Zealand Ministry for Primary Industries concerning the access of fruit fly host produce into New Zealand from Australia. The product described was fumigated at a rate of ........................................ g/m³ with ..........................................................(name of fumigant) for ............. hours at a temperature range of ................................ - ......................... °C.

Signature

Date

NOTE: This declaration to be securely attached to the nominated EX186 (i.e. transfer certificate) prior to shipment.
### 2.8 Cold Disinfestation Record

**On Shore Cold Disinfestation Treatment Record**

- **DATE** ..............................................  **COMMODITY RECEIVED** ..............................................
- **PACKHOUSE NAME** ...........................................................................................................
- **EXPORTERS NAME** .............................................................................................................
- **LOT IDENTIFICATION** .......................................................................................................  

**DATE CHAMBER LOADED**............................................  **DATE CHAMBER REACHED 1 °C +/- 0.6 °C**.................................................................

All Sensors/probes were calibrated using the ice slurry method on .................(Date)

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>TEMPERATURE CHECKS</th>
<th>INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sensor 1</td>
<td>Sensor 2</td>
</tr>
</tbody>
</table>
2.9 WITHDRAWAL NOTICE

WITHDRAWAL NOTICE

Following inspection of my/our premises/property by Department of Agriculture inspector

I, ........................................................................ on ........................................

(Name) (Date)

I/We agree that my premises/property does not meet with the conditions as required by the Australia - New Zealand Bilateral Quarantine Arrangement and agree to the withdrawal of my/our registration under the Agreement until further notice.

I/We understand should I/we wish to re-enter the Arrangement protocol at a future date, I/we will have to request an initial audit of my/our property/premises and be assessed as satisfactory before registration will be issued.

<table>
<thead>
<tr>
<th>Name in block letters</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>........................................</td>
<td>.........................</td>
<td>..............</td>
</tr>
</tbody>
</table>

Voluntary Withdrawal

I/we agree my/our property is no longer required to be registered under the terms and conditions required for the New Zealand export trade for NZ BQA commodities.

I/we agree that our current registration be withdrawn from the New Zealand register. I/we understand should I/we wish to re-enter the Arrangement at a future date, I/we will have to request an initial audit of my/our property/premises and be assessed as satisfactory before registration will be issued.

<table>
<thead>
<tr>
<th>Name in Block letters</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>........................................</td>
<td>.........................</td>
<td>..............</td>
</tr>
</tbody>
</table>

DEPARTMENT OF AGRICULTURE

DOCUMENTATION

Authorised person

Fax / email to State Office

Inspector’s signature

Appropriate Exporters Advised (State Office)

Grower Deleted from Active Register (State Office)

..............................................
2.10 SUSPENSION NOTICE

SUSPENSION NOTICE

Following inspection/audit of the following property/premises:- (Grower – Packer – ED – Treatment Centre – Exporter – Freight Forwarder – Other …………………) (select appropriate title)

Name ....................................................
Address ....................................................
....................................................
....................................................
Reg No ....................................................

I believe for the following reasons that the entity outlined above no longer complies with the requirements of the Australia - New Zealand Bilateral Quarantine Arrangement and the related appendices:-

Description of Deficiency ..........................................................................................................
..........................................................................................................
..........................................................................................................
..........................................................................................................
..........................................................................................................

and following discussions with .............................. (Name) they (please indicate):

have no intention to correct the above mentioned deficiency in the immediate future

OR

are suspended until corrective action has been implemented and successful re-audit has been undertaken

I hereby declare the entity outlined above is suspended from Appendix ………………… (all, 4, 10 etc) of the Australia - New Zealand NZ BQA until further notice.

.................................................... .................................................... ....................................................
Name in block letters Inspector's Signature Date
or Authorised Person

.................................................... .................................................... ....................................................
Representative Name Representative Signature Date

OFFICE DOCUMENTATION
Grower deleted from active Register (State Office)
Copy to State Office (fax)
2.11 DECLARATION OF DIMETHOATE TREATMENT

THIS DECLARATION TO ACCOMPANY THE TRANSFER OF
DIMETHOATE TREATED COMMODITIES

I, ........................................................................................................of ..............................................................................................................................

hereby declare that the ........ cartons of

...........tomatoes/capsicums/cucumbers/rockmelons/hodewdew melons/scallopinis (circle as applicable) consigned to.................. ...........................................................on ............................................. (date) were harvested from the following registered blocks........................................................................................................................

................................................................................................................................................................. AND

1. have been subjected to (TICK AS APPLICABLE)

   (i) dipping in a solution of dimethoate with 400 ppm active ingredient for a minimum period of one minute (tomatoes only).

   OR

   (ii) flood spraying with a solution of dimethoate of 400 ppm active ingredient. Fruit must not be handled for at least one minute after spraying (i.e. remain wet).

AND

the insecticide solution was freshly prepared immediately prior to use.

Date of treatment........................................................................................................

AND

3. further declare ................................................. (insert name of supervisor) a designated person nominated by............................... (insert name of exporter) has supervised the loading of this consignment for transport to ..........................................................(insert name of establishment or freight forwarder).

Declared at ..................................................................................................................

this ........................................ day of .....................................................20........

Signature .............................................. Witness ...........................................
2.12 **CONTAINER REPORT SHEET**

**CONDITION OF HYGIENE OF SHIPPING CONTAINERS**

Date..............................

Shipping Container No. ............................................

Place of Inspection....................................................................................................

Produce to be loaded a/c Exporters Name.............................................................

Produce to be loaded as per EX28/RFP Nos.........................................................

Inspection of Container

Condition of Floor.........................................................
Roof .................................................................
Walls.................................................................
Doors....................................................................

Detail any repairs made prior to loading

............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................

Signed............................................ Name in Block Letters......................................
2.13 AVOCADO GROWER DECLARATION PORT SHEET

EXPORT OF AVOCADOS TO NEW ZEALAND

GROWER DECLARATION

I/We...........................................................................................................................................

of..............................................................................................................................................declare the

Avocados, variety..........................................................................................................................

in bins/packages marked..............................................................................................................were

harvested from block/farm No......................................................................................................in
which the trees are registered under the Avocado Nursery Voluntary Accreditation Scheme
(ANVAS) or the Virus Tested Tree Registration Program (VTTR) and were propagated from stock
tested and found to be free from Sun Blotch Viroid.

Signed.............................................

Position.............................................

Date.................................................
ATTACHMENT 3    ADDENDUM – TABLE GRAPES – IRRADIATION

In addition to appendices 2 (fruit fly area freedom) and 5 (cold storage disinestation) grapes can be exported to New Zealand under appendix 12 (irradiation) of the NZ BQA/IHS.

The export of grapes to New Zealand must include the mandatory treatment of sulphur dioxide and carbon dioxide fumigation for redback spiders as detailed at Section 11 of this Manual.

During any inspection, should a pest be found that is not contained in the Pest Lists for that commodity, found on page 103, the pest must be regarded as a Quarantine Risk group 2 pest until official categorisation has been determined by the Department of Agriculture/MPI.

The following entities must be registered to export table grapes to New Zealand:

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Treatment</th>
<th>Registration</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grapes <em>Vitis vinifera</em></td>
<td>Irradiation*</td>
<td>✓</td>
<td>*Irradiation at 150 Gy can only occur if in-field pest control activities</td>
</tr>
<tr>
<td></td>
<td>Appendix 12</td>
<td>✓</td>
<td>for the Risk group 2 pest <em>Conogethes punctiferalis</em> (yellow peach moth)</td>
</tr>
<tr>
<td></td>
<td>150 Gy</td>
<td>✓</td>
<td>are implemented throughout the production season otherwise irradiation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>at 289Gy</td>
</tr>
<tr>
<td></td>
<td>Irradiation</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appendix 12</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>289 Gy</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Addendum record

<table>
<thead>
<tr>
<th>Addendum No.</th>
<th>Entered by</th>
<th>Date added</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M Mackrell</td>
<td>March 2019</td>
</tr>
</tbody>
</table>